

DEVELOPING A TOOL TO MEASURE SOCIAL WELL-BEING IN THE CONTEXT OF SOCIAL PRESCRIBING

A GROUP CONCEPT MAPPING STUDY REPORT

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1. Introduction and background

Researchers from the Wales School for Social Prescribing Research (WSSPR) have been commissioned by Health and Care Research Wales (HCRW) to develop an evaluation methodology framework, materials and reporting standards for social prescribing research. Through this work and discussions with members of the Wales Social Prescribing Research Network, a methodological issue regarding measurement tools used for social prescribing evaluation was identified.

The evidence base for social prescribing is weak (Bickerdike et al 2017; Roberts et al under review). Evaluations of social prescribing to date generally report improved well-being amongst other outcomes in qualitative data collected, but this increase is rarely mirrored in the quantitative data (Pescheny, Randhawa & Pappas, 2019; Carnes et al, 2017). We hypothesise that changes in well-being are not detected in quantitative studies, because the tools used to conceptualise, and measure well-being are not capturing all aspects of well-being.

Background

Social prescribing involves “*individuals being referred/self-referring to non-medical interventions run by a third-party organisation in order to contribute to their general health and well-being*” (Roberts et al., 2020). Social prescribing interventions are complex and diverse (Tierney et al., 2020; Roberts et al., 2020), they involve multiple components, varying pathways, varying population groups and diverse programme aims. A literature review of the aims of 41 social prescribing interventions identified that the most common individual level programme aims were to improve mental well-being (n=25) and social well-being (n=21), and the majority of studies stated multiple aims (Rempel et al., 2017).

In general terms, well-being refers to what helps lives go better for people (Fletcher, 2015, 2016; Galvin, 2018). It can refer to both individual mental and emotional states, as well as social environments and ability to access and enjoy social resources. These resources include access to health, education, employment, housing, income, community assets and inclusive and empowering social and relational networks. From discussions with the Wales Social Prescribing Research Network (WSPRN; WSSPR, 2020) it is apparent that both conceptions of mental and social well-being are distinct and important in social prescribing practice. In order to assess the impact of social prescribing, tools that capture both aspects of well-being are needed.

To date, the most commonly used tool to assess the impact of social prescribing in the literature (Rempel et al., 2017) is the Warwick Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007). This validated tool focuses on the subjective and internal mental states of mind and emotion of the individual over the past two weeks, exploring what they feel and think about themselves. From this, it is often used to make inferences about social well-being but does not set out to directly measure social well-being.

The Present Study

We propose that it may be feasible to simultaneously assess and evaluate the practice of social prescription by combining the WEMWBS with a new measurement tool to assess social well-being.

In order to do this, researchers at the University of South Wales have undertaken a Group Concept Mapping (GCM; Kane & Trochim, 2007) study to explore and develop the concept of social well-being. The findings from this study will be used to create the South Wales Social Well-Being Scale (SWSWBS). Future research will test the feasibility of using the SWSWBS in conjunction with the WEMWBS to produce a more comprehensive understanding of well-being for social prescribing practice.

2. Method and approach

The study was conducted between 15th July and 20th September 2020. Ethical approval was granted by the University of South Wales Faculty of Life Sciences Education low-risk ethics panel [REF: 200607LR].

Group Concept Mapping

The study used an online consensus method called Group Concept Mapping (GCM; Kane & Trochim, 2007) to explore participants' perspectives on what makes up the concept of social well-being. Participants are asked to complete three sequential stages; brainstorming, sorting and rating. Brainstorming asks participants to generate statements in response to a focus prompt. Once statements are generated, participants sort all the statements into 'piles' that make sense to them, which they label. Finally, participants are asked to rate each statement on multiple rating scales.

Before starting the group concept mapping study, the international literature around well-being and social well-being was reviewed (SS). This generated additional statements, and these were added to the statement list produced in brainstorming following the participant statement cleaning process.

Using GCM allows researchers to reach geographically dispersed participants across the UK and abroad. Participants can engage with the research at a time and place convenient to them. The study was led by a trained GCM facilitator (ME) and supported by a research team with extensive GCM experience (CW, DP).

Demographic questions

Upon entry to the online research space, participants were asked to answer five demographic questions that were used to analyse the data:

- Which of the following describes how you think of yourself? [List of options i.e. female, male, prefer not to say, other].
- What is your age?
- Where do you live? [List of options i.e. England, Wales, Scotland, Northern Ireland, Republic of Ireland, Outside of the United Kingdom].
- Which of the following best describes you? [List of options i.e. 'I do not have a disability', 'social/communication impairment', 'blind or serious visual impairment', 'deaf or serious hearing impairment', 'long-standing illness or health condition', 'mental health condition', 'specific learning difficulty', 'physical impairment or mobility issues', 'condition not listed', 'two or more impairments and/or disabling medical conditions'].
- Which phrase best describes the area that you live in? [List of options i.e. City, Town, Village, Rural, Other].

Stage 1: Brainstorming

Participants were given the following instruction:

Rather than focusing on your feelings and thoughts about yourself, we want you to think about your social world. By social world we mean things that you have or own, and other things that help you do what you want to do in your everyday life, so that you can be the person you want to be. It also covers when you're inside and outside of your home.

They were then asked to generate statements in response to the focus prompt:

"when I think of the things that have made up my social world over the last year, I include..."

The focus prompt and instructions were generated through discussion between the research team. Having reviewed the literature, the team discussed the importance of explaining what the social world may represent to participants, and creating a focus prompt that was open and understandable. It was important to ask participants to consider what had made up their social world over the last year, as opposed to a shorter time period, because the study commenced in July 2020, which was 4 months into the COVID-19 pandemic and associated restrictions.

The brainstorming stage of the study was open for a 3-week period (20.07.2020 – 9.08.2020).

Stage 2: Sorting

In this stage, participants were asked to sort statements into as many piles as made sense to them. They were then asked to label these piles. The sorting stage of the study was open for a 2-week period (17.08.2020 – 31.08.2020).

Stage 3: Rating

In the final stage, participants were asked to rate each of the statements on three 5-point Likert scales:

- Importance 1 (not important to my social world) to 5 (important to my social world)
- Access 1 (no access) to 5 (constant access)
- Enjoyment 1 (not enjoyable) to 5 (extremely enjoyable)

The rating stage of the study was open for a 3-week period (1.09.2020 – 20.09.2020)

Analysis

The data was reviewed, cleaned, and online software acceptance processes carried out. Four data analysis steps were then followed using the online software:

- Step 1: The five participant demographic responses were analysed using descriptive statistics.
- Step 2: A similarity matrix was created from the participant sorted statements. This demonstrates the number of participants who sorted the statements together.
- Step 3: Multidimensional-scaling analysis of the similarity matrix produced a statement point map. Each participant statement is allocated a point on a two-dimension (XY) axis (Figure 1).
- Step 4: Ward's algorithm was used in a hierarchical cluster analysis of statement clusters to produce a cluster map with cluster labels (see Figure 2), cluster rating maps (Figures 3-5), a pattern match report (Figure 6) and go-zone analyses (Figures 7-9). The go-zone analysis enabled us to identify the top 10 statements that participants perceive to be most important, accessible and enjoyable. Pattern match reports explored whether there were any differences between

ratings on importance, access and enjoyment based on participant demographics (Figures 10-13).

The study team comprised of University of South Wales academics (CW, SS, DP, ME) and colleagues from Elemental Software. They were invited to review the findings following analysis.

3. Findings

Participants

Invitations to participate were sent to gatekeeper organisations and networks including the Wales Social Prescribing Research Network, Wales School for Social Prescribing Research, Group Wisdom, Elemental Software, WCVA, international academic networks, PRIME Centre Wales, RCE Cymru, Older People's Commissioner for Wales and others. Gatekeepers were asked to share the invitation amongst their networks with individuals who may be interested in participating. One hundred and fifty-eight ($n = 158$) people registered an interest in participating, and ninety-six ($n = 96$) returned a completed consent form. Of those, ninety-three ($n = 93$) were enrolled onto the Group Wisdom™ software and three ($n = 3$) joined a study advisory group. One individual participated in the study and joined the study advisory board. Participants who engaged in the GCM completed the following:

- Participant questions ($n = 78$)
- Brainstorming activity ($n = 67$)
- Finished sorting activity ($n = 50$)
- Finished importance rating activity ($n = 58$)
- Finished access rating activity ($n = 48$)
- Finished enjoyment rating activity ($n = 42$)

The majority of participants described themselves as female (71.79%; Table 1). All age groups were represented from 19 years to 90 years and the average age of participants was 49 years (Table 2).

Table 1: How participants described themselves

Option	Frequency	%
Female	56	71.79
Male	22	28.21
Prefer not to say	0	0
Other	0	0
Total	78	100%

Table 2: Age range of participants

Age range (years)	Frequency	%
18-20	1	1.28
21-30	10	12.82
31-40	14	17.95
41-50	13	16.67
51-60	21	26.92
61-70	12	15.38
71-80	4	5.13
81-90	3	3.85
Total	78	100%

Most participants lived in Wales (73.08%), but there was representation from other countries including England (15.38%), Republic of Ireland (1.28%), United States of America (2.56%), Australia (2.56%), Spain (2.56%), Switzerland (1.28%) and Portugal (1.28%).

Table 3: Location of participants

Location	Frequency	%
England	12	15.38
Wales	57	73.08
Scotland	0	0
Northern Ireland	0	0
Republic of Ireland	1	1.28
Outside of the United Kingdom	8	10.26
Total	78	100%

We offered the next question about disability, special needs and/or medical condition as a multiple-choice question because we acknowledged that some participants might identify with having two or more. The majority of participants identified as having no disability (77.33%). The remaining participants reported social/communication impairment, long-standing illness or health conditions, mental health conditions, learning difficulties, physical impairments/mobility issues, two or more impairments/disabling medical conditions or other conditions not listed (22.66%) (See Table 4).

Table 4: Participant disability, special needs or medical condition.

Option	Frequency	%
I do not have a disability	58	77.33
I have a social/communication impairment such as Asperger's syndrome/other autistic spectrum disorder	1	1.33
I am blind or have serious visual impairment uncorrected by glasses	0	0
I am deaf or have a serious hearing impairment	0	0
I have a long-standing illness or health condition, such as cancer, HIV, diabetes, chronic heart disease or epilepsy	1	1.33
I have a mental health condition, such as depression, schizophrenia or anxiety disorder	8	10.67
I have a specific learning difficulty, such as dyslexia, dyspraxia or AD(H)D	1	1.33
I have a physical impairment or mobility issues, such as difficulty using your arms or using a wheelchair or crutches	2	2.67
I have a disability, impairment or medical condition that is not listed above	3	4.00
I have two or more impairments and/or disabling medical conditions	1	1.33
Total	75	100%

Finally, participants were asked to describe the type of area in which they lived. There was an even distribution between the type of location described, between city (24.68%), town (28.57%), village (20.78%), rural (19.48%) and other (6.49%, including seaside location, suburbs of a city, outskirts of a city, small town in rural location). See Table 5.

Table 5: Participant descriptions of the type of area in which they live

Option	Frequency	%
City	19	24.68%
Town	22	28.57%
Village	16	20.78%
Rural	15	19.48%
Other	5	6.49%
Total	77	100%

The concept of social well-being

Activity 1: Brainstorming

During the brainstorming activity participants ($n = 67$) generated an initial list of 363 statements in response to the focus prompt, “when I think of the things that have made up my social world over the last year, I include...”.

The Key Words in Context (KWIC; Kane & Rosas, 2017) method was used to synthesise the statement list. This involved reviewing the raw statement list, removing redundant/irrelevant statements and editing statements to ensure that they grammatically completed the focus prompt. Compound statements were split, resulting in 462 individual statements, and duplicates were removed, resulting in 207 statements. Keywords that appeared in the original statements were identified and

each statement was assigned a code word (e.g. Sport, Outdoors, Family and Friends, Celebrations). Each set of statements within a code word were reviewed by the research team and synthesised into statements that shared similar sentiment. Statements that were identified in the literature review ($n = 9$) were then added to the statement list and the final list was reviewed by the research team. Both the raw and synthesised lists were shared with the advisory group for comment before being reuploaded to the software for stage 2. The full list of the final 125 statements can be found in Appendix 1 and examples of statements in the final list can be found in Table 6.

Table 6: Examples of statements from the synthesised list

Statement No.	Statement
19	Going out with family and friends to restaurants, cafes and bars
37	Supporting family members, e.g. taking them shopping every week
81	Greeting people I meet when exercising and feeling part of an unofficial club when others say hello
115	Thinking about what I really want from my employment, work life balance
121	The ability to use government services, e.g. health, community

Activity 2: Sorting

In this activity participants were asked to sort and group all the statements into piles and provide each pile with an individual label. From this, the software generated a point map showing all the 125 statements (Figure 1).



Figure 1: Computer generated point map of 125 statements

The dataset had a final stress value of **0.2478**. The stress value is considered to be similar to reliability, with an acceptable range of 0.205 – 0.365 (Kane & Trochim, 2007), so the map generated is considered to be a good fit. Each point on the map represents a statement. Proximity of

statements to other statements indicates how frequently the statements were sorted together by participants. For example, statements 79 and 117 (upper right of map) are close together and were therefore sorted together frequently. Conversely, statements 50 and 39 are on opposite sides of the map, so were either rarely sorted together or not at all.

The software then generated a number of cluster maps, to gather statements sorted together into similar clusters. The software gave options of 4 – 15 cluster solutions. The research team considered the selection and agreed upon a cluster map with **six clusters; everyday life, activities and pastimes (1), family and friends (2), connecting with others and supporting needs (3), community involvement (4), engaging with and reflecting on the wider world (5) and self-growth and security (6)** (Figure 2).

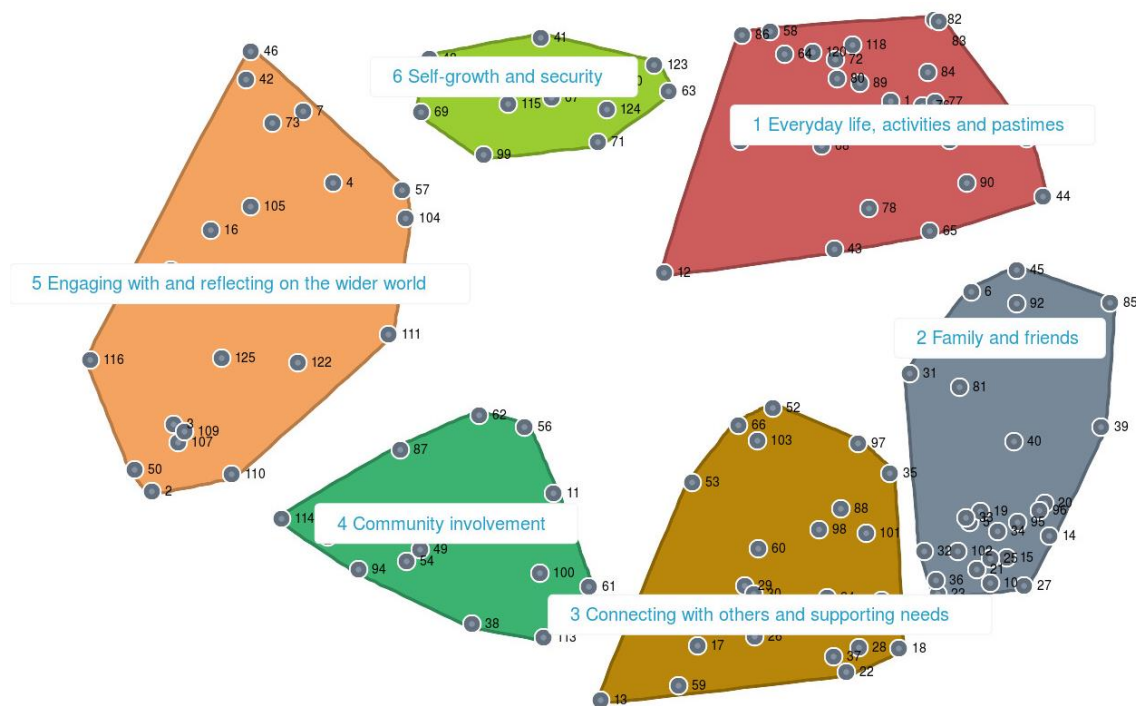


Figure 2: Cluster map with labels from the participant sorting exercise

The placement of each statement within a cluster is based on participant’s grouping of each statement. For example, statement 49, ‘becoming more of a community’ is placed on the ‘community involvement’ cluster because this is where it was most commonly placed by participants. The conceptual relationship between clusters is shown by the distance between them. The closer the clusters, the stronger relationship they have. Therefore, the cluster ‘everyday life, activities and pastimes’ is closer to ‘family and friends’ and ‘self-growth and security’ than the other clusters.

The ‘everyday life, activities and pastimes’ [1] cluster had the most statements (n=29) and ‘self-growth and security’ [6] had the least statements (n=12). Bridging values indicate how closely a statement is related to the items within the cluster it is placed, they range between 0 and 1. High bridging values indicate that a statement has been sorted with ideas in a number of other clusters. Low bridging values indicate that the statement was sorted more consistently within that cluster, these statements represent the ‘anchor statements’ within a cluster. Table 7 shows the number of statements per cluster, the cluster bridging value and the two statements with the lowest bridging values within the cluster (i.e. the anchor statements).

Table 7: Anchor statements for each cluster, number of statements per cluster and bridging value for clusters and anchor statements (lower bridging values represent a closer fit to the cluster).

No.	Cluster	Bridging value
1 – Everyday life, activities and pastimes (n=29)		0.21
1	Relaxing and creative activities by myself, e.g. sewing, painting, knitting, writing, photography, reading, doing jigsaw puzzles	0.08
75	Enjoying the sunshine	0.09
2 – Family and friends (n=25)		0.16
32	Reconnecting with old friends and letting go of others	0.00
36	Sharing with friends, e.g. my writing for discussion or recipes	0.00
3 – Connecting with others and supporting needs (n=22)		0.18
9	A large network of friends	0.07
60	Getting to know the neighbours and chatting to them outside our houses	0.09
4 – Community involvement (n=16)		0.41
61	Seeing neighbours and offering them support	0.27
56	Using local businesses – cafés, pubs, bookshops, record stores, DIY stores	0.29
5 – Engaging with and reflecting on the wider world (n=14)		0.68
111	Continuing to work after retirement age – inputting my experience and mentoring others during this difficult time	0.43
104	Using more technology, e.g. computer, mobile phone	0.47
6 – Self growth and security (n=12)		0.36
123	Being able to make worthwhile plans for myself and my future	0.22
124	Being able to put into practice worthwhile plans for myself and my future	0.22

Activity 3: Rating for 'importance', 'access' and 'enjoyment'

In the final activity, participants were asked to rate all 125 statements on three Likert scales ranging from 1 – 5 on *importance*, *access* and *enjoyment*. Table 8 shows the average rating on each scale for each of the seven clusters.

Table 8: Number of statements per cluster, bridging value and average rating for each cluster on scales of importance, access and enjoyment.

	Everyday life, activities and pastimes	Family and friends	Connecting with others and supporting needs	Community involvement	Engaging with and reflecting on the wider world	Self-growth and security
Number of statements	29	25	22	16	21	12
Bridging value	0.21	0.16	0.18	0.41	0.68	0.36
Average importance rating of cluster	3.50	3.44	3.02	2.97	2.87	3.61
Average access rating of cluster	3.48	3.08	2.72	2.73	2.97	3.61
Average enjoyment rating of cluster	3.78	3.84	3.26	3.30	2.39	3.66

The cluster-rating importance map (Figure 3 and Table 8) demonstrates that participants rated the ‘self-growth and security’ [6] cluster as the most important to their social world (M=3.61), closely followed by the ‘everyday life, activities and pastimes’ [1] cluster (M=3.50) and the ‘family and friends’ [2] cluster (M=3.44). Conversely, the ‘engaging with and reflecting on the wider world’ [5] cluster was rated the least important to their social world (M=2.87), followed by ‘community involvement’ (M=2.97).

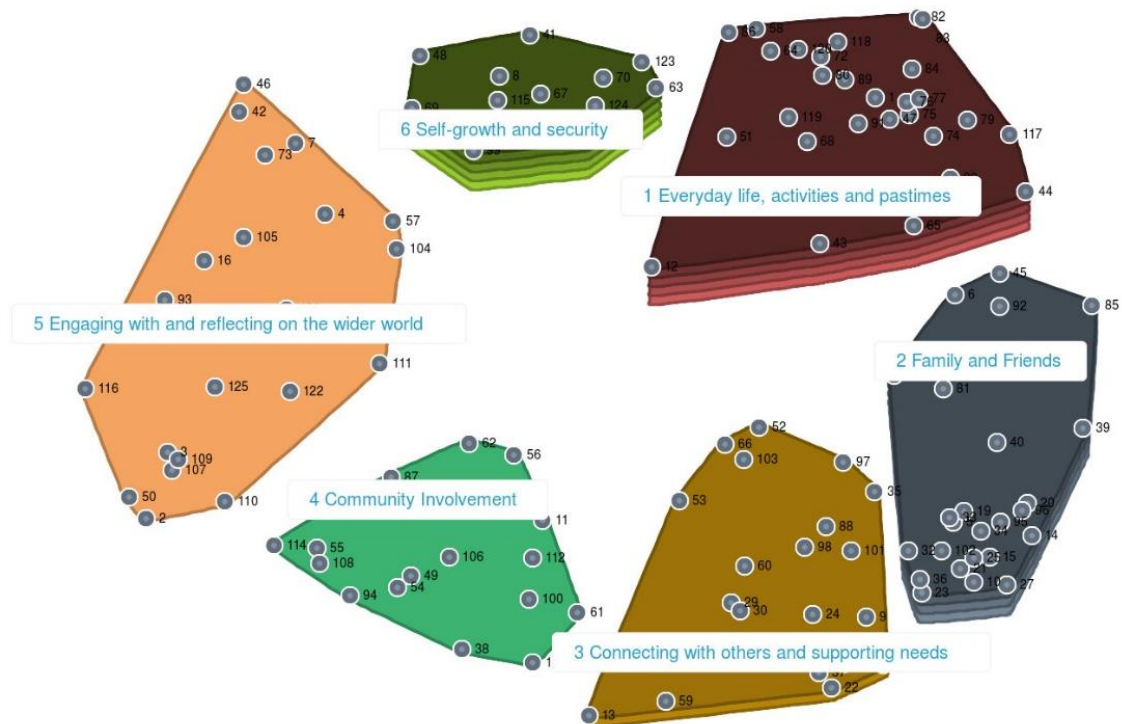


Figure 3: Cluster rating map: importance of statements to social well-being.

The second cluster-rating map (Figure 4 and Table 8) indicates that, as with importance, participants rated their access highest for the ‘self-growth and security’ [7] cluster (M=3.61), followed by ‘everyday life, activities and pastimes’ [1] (M=3.48). However, the lowest ratings for access were for the ‘connecting with others and supporting needs’ [3] (M=2.72) and ‘community involvement’ [4] (M=2.73) clusters.

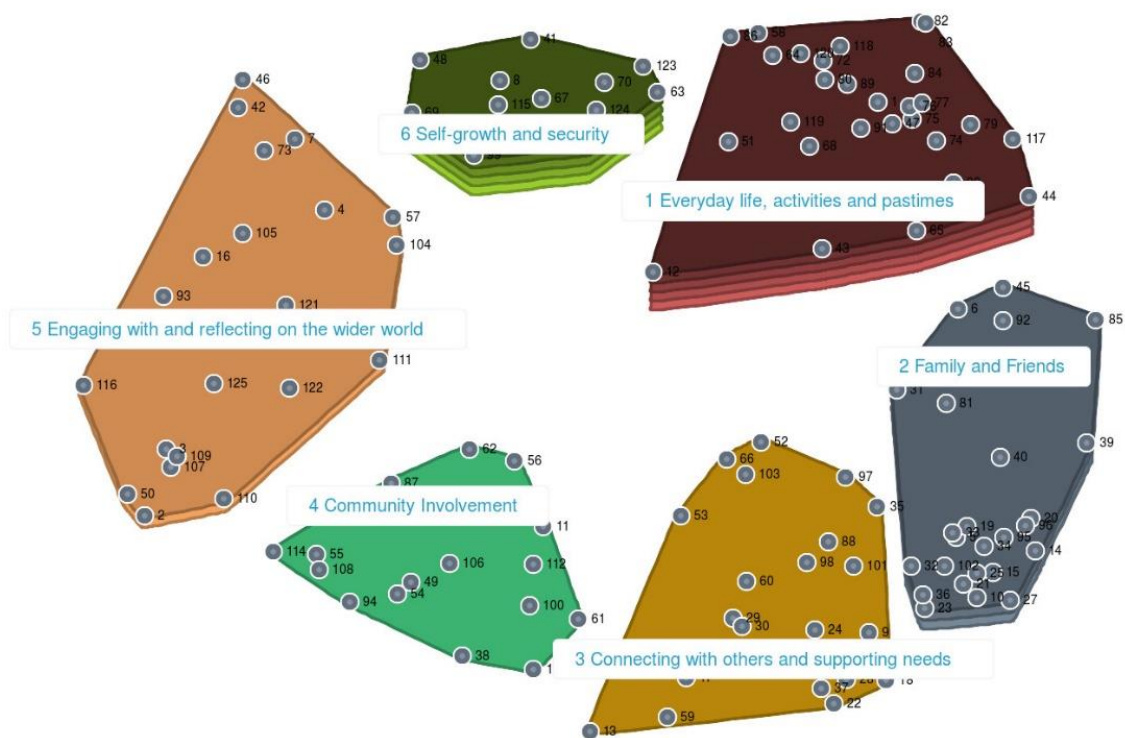


Figure 4: Cluster rating map: access to statements for social well-being

Finally, the cluster map for the enjoyment rating scale (Figure 5 and Table 8) demonstrates that the cluster that participants rated as the most enjoyable was the ‘family and friends’ [2] cluster (M=3.84), followed by ‘everyday life, activities and pastimes’ [1] (M=3.78). Conversely, ‘engaging with and reflecting on the wider world’ [6] were rated as the least enjoyable cluster (M=2.39).

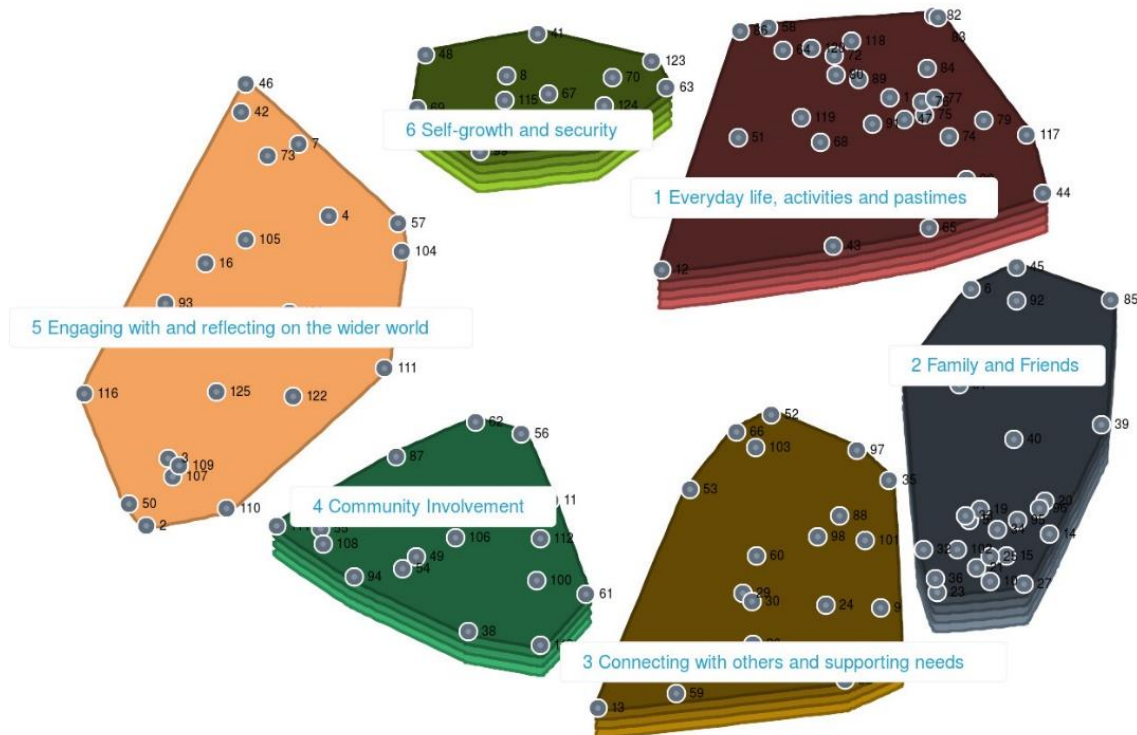


Figure 5: Cluster rating map: enjoyment of statements for social well-being

These cluster ratings can be further understood with Pattern Match reports. Figure 6 shows the average rating per cluster on the three scales. This is a relative pattern match, and as such presents the cluster averages within the range of ratings for each scale, rather than on a fixed, absolute scale. The relative pattern match enables the researcher to compare multiple measurements to establish a trend (Kamat, 2019). As the rating scales measure different concepts (i.e. importance, access, enjoyment), it is more useful to compare the ranking of clusters on the different scales, as opposed to the absolute numbers, which may not be comparable.

The pattern match indicates general consistency between the importance and access rating scales ($r=0.86$), with the exception of the 'family and friends' [2] cluster, which had a high importance rating ($M=3.44$), but lower access ($M=3.08$).

The correlation between the importance and enjoyment ratings was also strong ($r=0.84$), whereas the relationship between access and enjoyment was weaker ($r=0.48$). The discrepancies between enjoyment and access were particularly apparent for the 'family and friends' [2], 'community involvement' [4] and 'connecting with others and supporting needs' [3] clusters. These clusters had higher ratings of enjoyment and access, and lower ratings of importance.

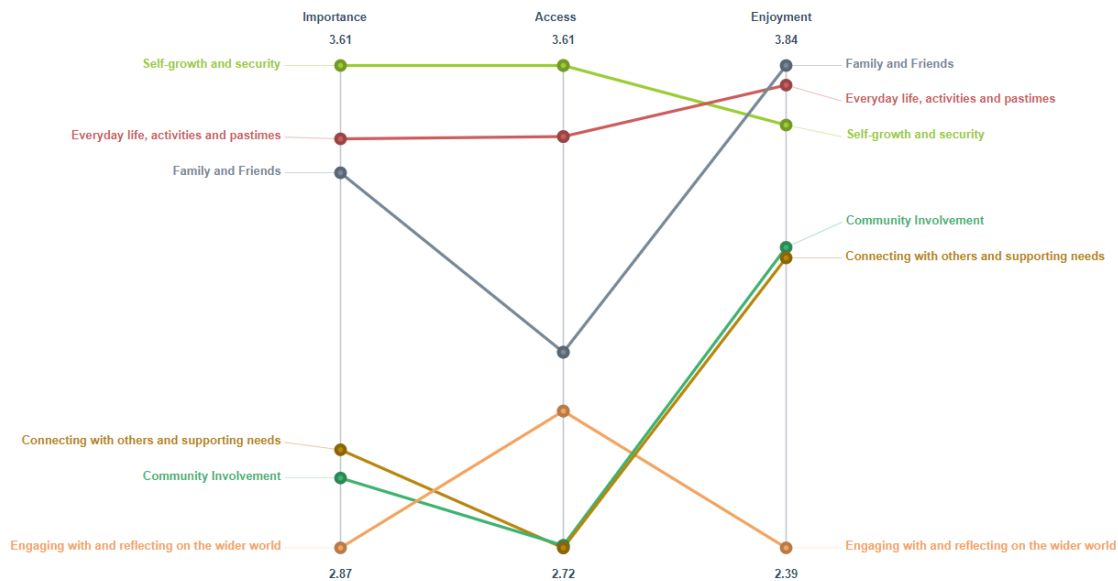


Figure 6: Relative pattern match report comparing cluster ratings for importance, enjoyment and access.

Group Wisdom™ software also enables the researcher to produce a ‘Go-Zone’ report. This places statements on a graph based on their average rating on two of the scales used in activity 3. The Go-Zone is split into four quadrants based on the average rating for all statements for each of the two scales. Figures 7-9 show the Go-Zone reports for the three combinations of scales. The Go-Zone correlations for the Importance-Access report ($r=0.69$) and the Importance-Enjoyment report ($r=0.73$) are strongly positive. This indicates that statements rated as more important tended to also be rated as more accessible and more enjoyable. However, the correlation for the Access-Enjoyment is a weaker positive relationship ($r=0.45$). As with the Importance-Access/Enjoyment relationship, this shows a positive relationship in that if a statement was rated as more accessible, it tended to be rated as more enjoyable, but this relationship was weaker.

The Go-Zone reports can be used to identify gaps in service provision and access based on things that people rate as important and enjoyable in their social worlds. The green and blue quadrants represent agreement on the two scales (i.e. a statement rated as high in importance and high in access will be in the green quadrant). Whereas the orange and yellow quadrants represent divergence between the two scales (i.e. orange represents high access but low importance in Figure 7, yellow represents low enjoyment but high access in Figure 9).

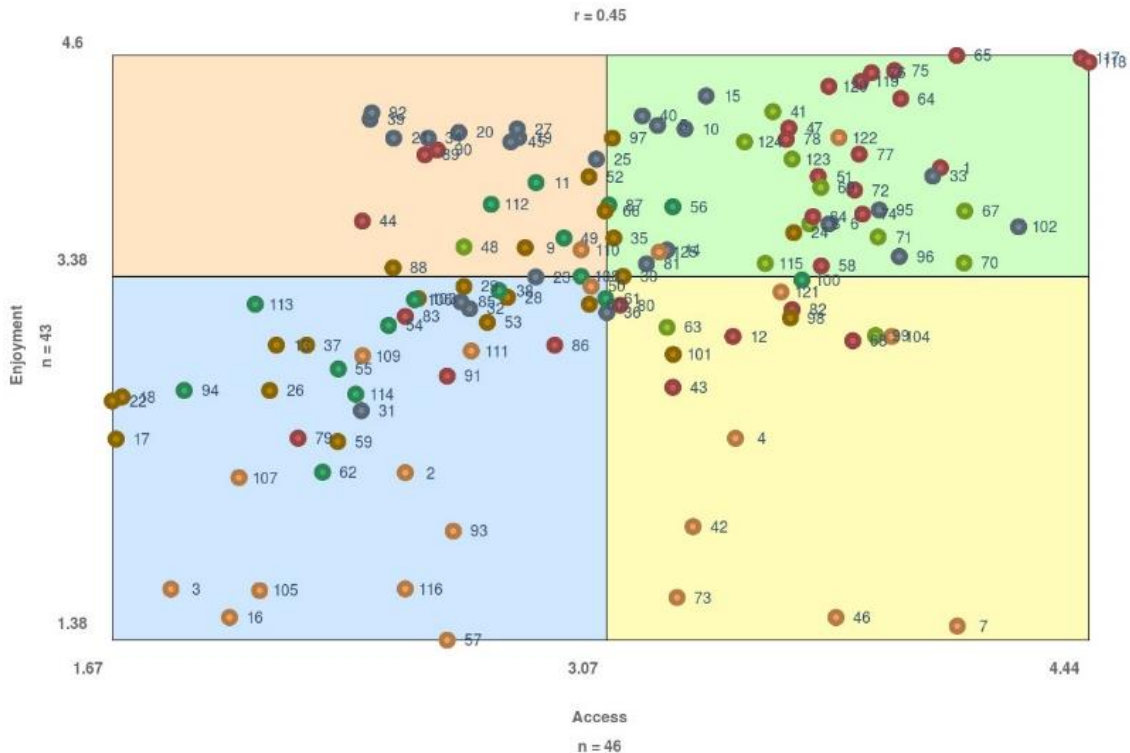


Figure 9: Go-Zone report displaying how each statement is reported in relation to access and enjoyment. Note, statement point colours relate to which cluster the statement sits within.

The top ten statements rated highest on *importance*, *access* and *enjoyment* can be found in Table 9. The top eight statements can be found within the cluster ‘everyday life, activities and pastimes’ [1], the final two statements come from the ‘self-growth and security’ [6] and ‘engaging with and reflecting on the wider world’ [5] clusters.

Table 9: Statements rated as highest on importance, access and enjoyment

No	Cluster	Statement	Importance	Access	Enjoyment	Average
117	1	Living in a safe home environment	4.539	4.422	4.581	4.514
118	1	Living in a healthy home environment	4.519	4.444	4.558	4.507
65	1	Having a laugh	4.340	4.068	4.595	4.334
64	1	Freedom to live my own life and be myself	4.346	3.909	4.357	4.204
119	1	Living in a safe environment outside my home	4.333	3.796	4.452	4.194
120	1	Living in a healthy environment outside my home	4.440	3.705	4.425	4.190
75	1	Enjoying the sunshine	4.098	3.891	4.512	4.167
76	1	Spending time in nature, e.g. in the mountains, in the water, in the countryside, with horses	4.077	3.826	4.500	4.134

41	6	Being financially secure (having enough income to meet my needs)	4.327	3.546	4.286	4.053
122	5	Being able to do worthwhile paid or unpaid work	4.058	3.733	4.143	3.978

By examining the Go-Zone presented in Figure 7, Importance-Access, it is possible to identify statements which participants identify as important to their social world but that they lack access to (yellow quadrant). Seventeen statements ($n=17$) were placed within this quadrant. The top ten statements rated highest on importance, lowest on access and highest on enjoyment can be found in Table 10. The majority of statements in this quadrant can be found within the cluster 'family and friends' [2] ($n=8$; 47%), the top four statements all sat within this cluster. Other statements in this quadrant sat within 'connecting with others and supporting needs' [3] (23.5%), 'community involvement' [4] (11.8%), 'everyday life, activities and pastimes' [1] (11.8%) and 'engaging with and reflecting on the wider world' [5] (5.9%). No statements in this quadrant sat within the 'self-growth and security' [6] cluster.

Table 10. Statements rated as highest on importance and enjoyment but lowest on access.

No	Cluster	Statement	Importance	Access	Enjoyment	Average
92	2	The ability to travel anywhere, e.g. to see friends and family, to go with a partner, family and friends to other places or on holiday	3.750	-2.405	4.279	1.875
39	2	The ability to travel anywhere to see friends and family and spend time with them	3.673	-2.400	4.244	1.839
21	2	Hugging friends and family	3.804	-2.467	4.140	1.826
27	2	Meeting up with family and friends and doing things together, e.g. playing games, playing music, following sports, watching films	3.923	-2.818	4.191	1.765
89	1	Exploring the world and taking in new experiences and places	3.647	-2.556	4.048	1.713
37	3	Seeing my oldest and closest friends regularly	3.560	-2.565	4.140	1.711
20	2	Having family and friends over for dinner (e.g. themed evenings), drinks or to stay for weekends	3.385	-2.652	4.171	1.634

90	1	Organising short breaks and holidays to the countryside, coast or cities	3.404	-2.591	4.075	1.629
19	2	Going out with family and friends to restaurants, cafes and bars	3.510	-2.822	4.143	1.610
25	2	Meeting family and friends outside, e.g. gardens, parks, beaches, picnics	3.784	-3.044	4.024	1.588

Rating analysis by participant demographics

Generally, ratings of importance ($r=0.98$), access ($r=0.99$) and enjoyment ($r=0.99$) were similar between males and females who participated in the study, see Figure 10. Female ($M=3.63$) rated 'everyday life, activities and pastimes' as more important than males ($M=3.13$), $t(56) = 2.5236$, $p=0.0145$. Other differences in ratings were not significant.

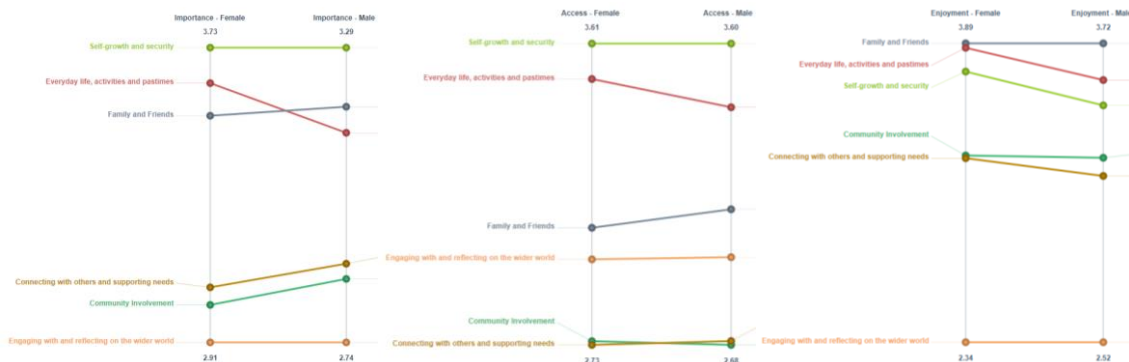


Figure 10: Relative pattern match reports comparing male and female on the three rating scales.

The mean age of participants in the study was 49 years (Median = 51 years). Ratings on the three scales were compared for participants over and under this age, see Figure 11. There were no differences in ratings of access ($r=0.99$) and enjoyment ($r=1.00$) between the two age groups. On the importance scale ($r=0.90$) participants under 49 years old rated 'connecting with others and supporting needs' [3] and 'community involvement' [4] as more important than those over 49 years. Whereas people over 49 years rated 'engaging with and reflecting on the wider world' [6] as more important than those under 49 years.

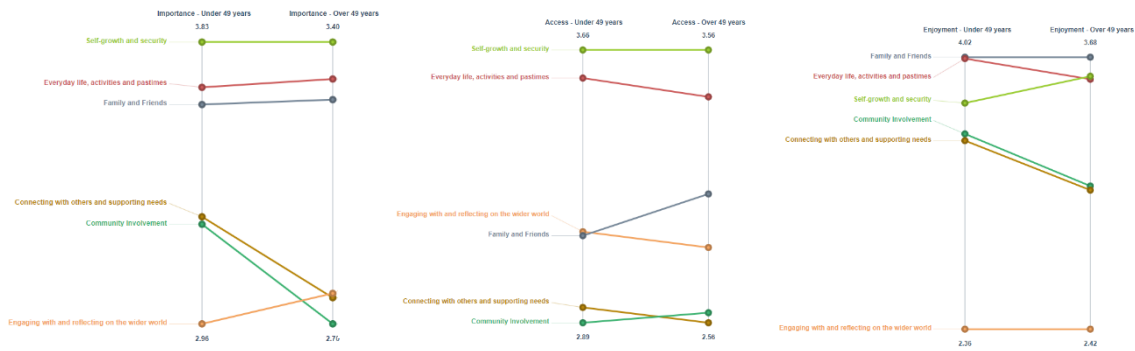


Figure 11: Relative pattern match reports comparing participants over and under 49 years (mean age of participants) on the three rating scales.

The majority of the participants completing the rating stage resided in Wales (68%), participants living in other locations were grouped in a second group for analysis, see Figure 12. Ratings for importance ($r=0.86$), access ($r=0.95$) and enjoyment ($r=0.98$) were highly correlated between participants living inside and outside of Wales.

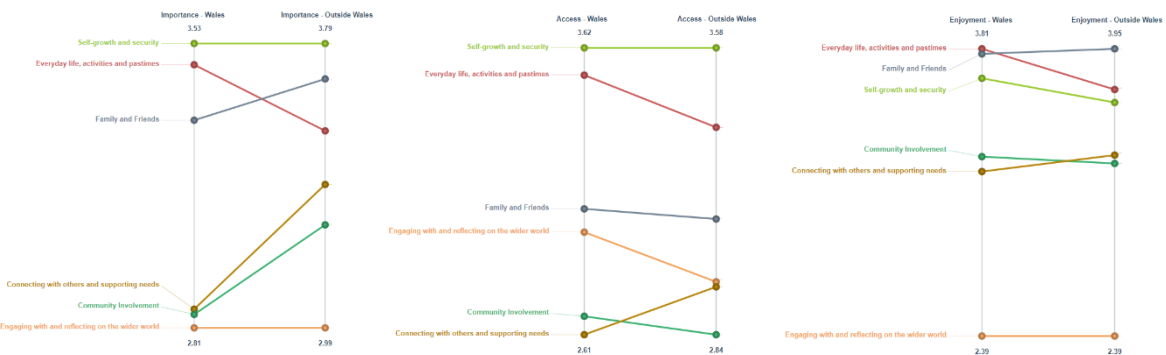


Figure 12: Relative pattern match reports comparing participants living inside and outside of Wales on the three rating scales.

The majority of the participants completing the rating stage reported that they did not have a disability (75%). The remaining participants reported a range of disabilities or conditions (See Table 4), for the purpose of this analysis, these participants were amalgamated into a single group, see Figure 13. Ratings for importance ($r=0.89$), access ($r=0.98$) and enjoyment ($r=0.98$) were highly correlated between participants reporting a disability and those without. The pattern match indicates a slight trend toward lower importance ratings for participant with a disability, particularly on the 'everyday life, activities and pastimes' [1] and 'family and friends' [2] clusters.



Figure 13: Relative pattern match reports comparing participants with and without a disability on the three rating scales.

Finally, participant ratings were compared based on the type of area in which they live (city, town, village and rural). Ratings for importance, access and enjoyment were comparable across all four of the options, with all having a strong correlation ($r > 0.85$), see Figures 14-16.

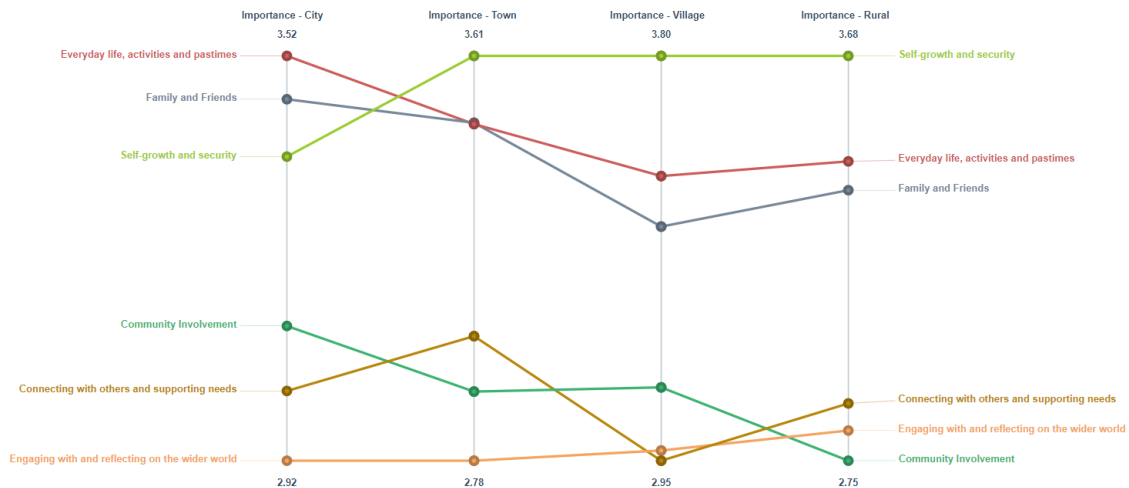


Figure 14: Relative pattern match report comparing participants living in cities, towns, villages & rural location on the importance rating scale.

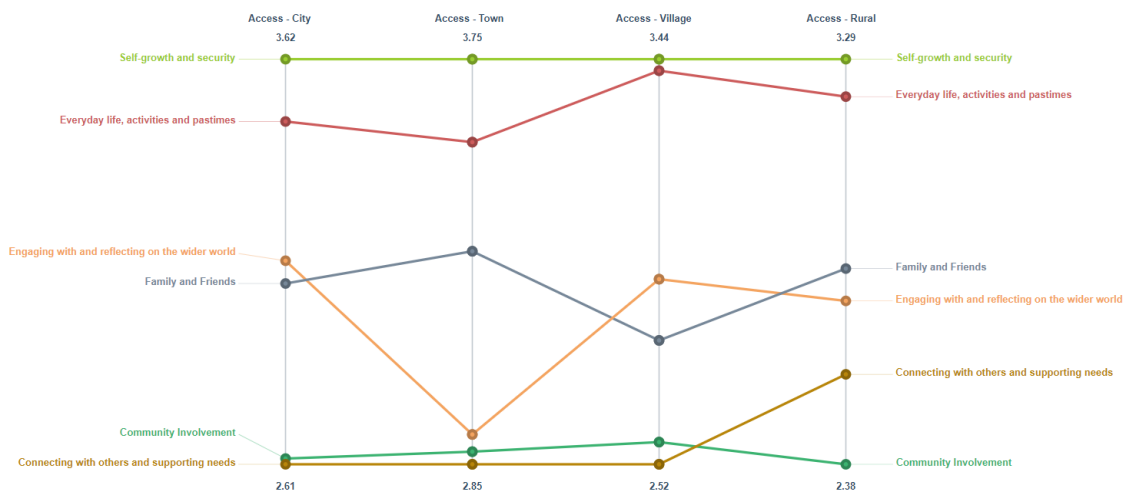


Figure 15: Relative pattern match report comparing participants living in cities, towns, villages & rural location on the access rating scale.

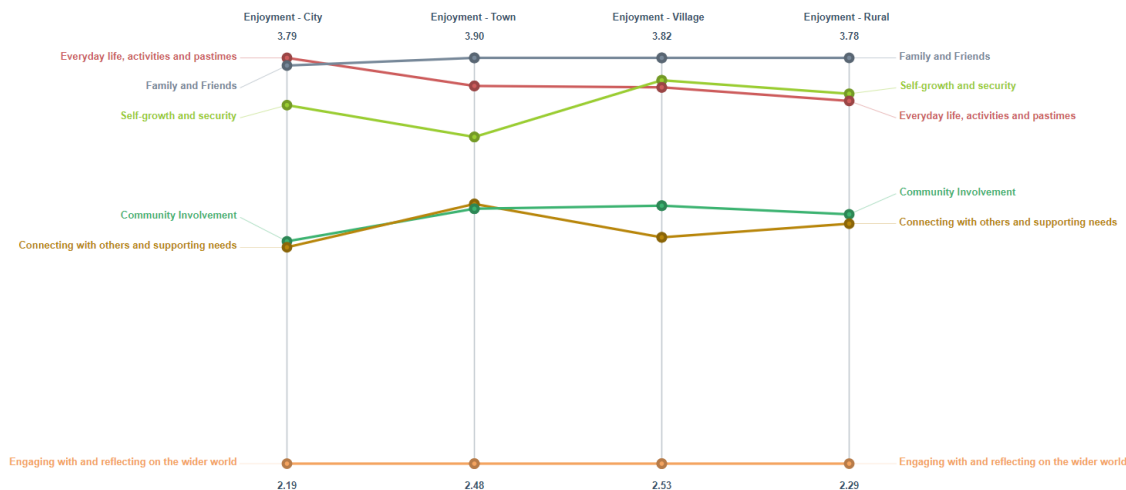


Figure 16: Relative pattern match report comparing participants living in cities, towns, villages & rural location on the enjoyment rating scale.

4. Conclusion

This Group Concept Mapping (GCM; Kane & Trochim, 2007) study engaged ninety-three ($n=93$) geographically diverse participants, with representation across the adult lifespan. These participants undertook three sequential tasks to develop the concept of social well-being remotely. The online nature of GCM facilitated a breadth of participation, particularly given the restrictions imposed by the COVID-19 pandemic.

Analysis of the data within GCM has enabled us to identify six elements of the concept of social well-being. These are; 'everyday life, activities and pastimes' [1], 'family and friends' [2], 'connecting with others and supporting needs' [3], 'community involvement' [4], 'engaging with and reflecting on the wider world' [5] and 'self-growth and security' [6]. Further analysis explored differences in the appraisal of these clusters and the associated statements based on three scales; importance, access and enjoyment. The ten statements which were rated the most important, most accessible and most enjoyable in relation to the social world can be found in Table 9.

In contrast, the statements that are rated as most important and most enjoyable, but least accessible can be found in Table 10. Most of the statements in this set lie within the 'family and friends' [2] cluster. This lack of access may reflect the COVID-19 restrictions imposed since March 2020, which restrict interaction with family and friends living outside of your household. Two of the statements can be found in cluster 1, 'everyday life, activities and pastimes' and these refer to travelling and going away, which has also been restricted by COVID-19 restrictions. This shows the direct impact that COVID-19 and the associated restrictions has had on social well-being, and highlights the need for support or supplementary activity to mitigate the effects of this lack of social interaction.

In-depth analysis was undertaken to explore whether the ratings of the statements/clusters varied based on the demographic questions that were asked of participants. Generally, there were no large differences in ratings of importance, access and enjoyment based on gender, age, location (country

and type of home area) or disability. This indicates that the concept of social well-being that has been identified in the present study is universal and the six clusters are relevant to a diverse population group.

Limitations

As discussed, the present study was undertaken amid the COVID-19 pandemic and restrictions. Feedback from some participants indicated that their responses were heavily influenced by the pandemic and current restrictions, which had been in place for 5-6 months at the point of data collection. To mitigate this, researchers encouraged participants to consider what had made up their social world over the previous year, and statements reflected activity that took place prior to the restrictions. Despite this, the tool that is based on the findings from the present study will be under constant development and scrutiny and will be reviewed and amended in accordance with societal changes.

Conclusions

The findings from the present study have identified six clusters which make up the concept of social well-being and the appraisal of the importance, access and enjoyment of these six clusters. The findings will be used to create the South Wales Social Well-being Scale (SWSWBS). The feasibility of using this measure alongside the Warwick Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007) for social prescribing monitoring and evaluation will be tested in future research.

5. References

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6. Appendices

Appendix 1: Full list of statements generated by participants (n=125)

1	Relaxing and creative activities by myself, e.g. sewing, painting, knitting, writing, photography, reading, doing jigsaw puzzles
2	Activism and protesting with members of the public, e.g. climate change, Black Lives Matter, LGBTQi (lesbian, gay, bisexual, transgender, queer, intersex), healthcare protection, Brexit
3	Campaigning in an election
4	Using social media to educate myself on topics such as Black Lives Matter, LGBTQi (lesbian, gay, bisexual, transgender, queer, intersex), and equality
5	Celebrating significant life events and special moments, e.g. birthdays, weddings, Christmas, Eid
6	Baking and cooking for myself and with family and friends
7	Covid-19, social distancing and lockdown
8	Embracing working from home and relishing the extra time it has given me to enjoy the simple pleasures such as watching my garden come into bloom
9	A large network of friends
10	Being close to my family
11	Completing a significant project through which I have made some lifelong friendships
12	Consciously thinking about who I need to reach out to
13	Contributing to my child's school life and extra-curricular activities
14	Discussing important issues of the day with friends
15	Eating meals with family
16	The practical parts of bereavement, e.g. emptying house contents and disposing of possessions, organising a funeral
17	Engaging and socialising with parents at my child's school and activities
18	Finding a long-lost family member
19	Going out with family and friends to restaurants, cafes and bars
20	Having family and friends over for dinner (e.g. themed evenings), drinks or to stay for weekends
21	Hugging friends and family
22	Looking after my grandchild
23	Making memories with my children, e.g. getting out on my bike with my children
24	Making time for others and supporting them emotionally - just listening when they need an ear, just being there for each other
25	Meeting family and friends outside, e.g. gardens, parks, beaches, picnics
26	Meeting my partner's family and friends for the first time
27	Meeting up with family and friends and doing things together, e.g. playing games, playing music, following sports, watching films
28	Missing my family and helping them by being present and not remote
29	Moving in with a partner
30	Providing long-distance support for isolated friends and family

31	Reading and then discussing books with friends or in a book club
32	Reconnecting with old friends and letting go of others
33	Regularly talking with family and friends on the telephone
34	Seeing my oldest and closest friends regularly
35	Sending letters, flowers and treats to people I care about but haven't been able to see in a long time.
36	Sharing with friends, e.g. my writing for discussion or recipes
37	Supporting family members, e.g. taking them shopping every week
38	Teaching kids life skills and mindset through play
39	The ability to travel anywhere to see friends and family and spend time with them
40	Walking with friends and family
41	Being financially secure (having enough income to meet my needs)
42	Worrying about finances to go out and about (having enough income to do what I want)
43	Drinking alcohol
44	Enjoying visits to the theatre and cinema
45	Exploring new places locally and trying out new restaurants
46	Fear of what might happen in the future, e.g. Brexit, pandemic
47	Slowing down and enjoying the peace of free weekends and evenings
48	Learning something new in a class, e.g. languages, cooking
49	Becoming more of a community
50	Continuing my work as a charity or association trustee
51	Exploring what's on my doorstep
52	Having a life where I can mix with people from all backgrounds
53	Having a natter at the shops when it is busy to show we are all human
54	Participating in local community groups - local radio station, skateboarding community, health driving group, singing group, book club
55	Starting to get more involved with community activities and politics in the village
56	Using local businesses - cafés, pubs, bookshops, record stores, DIY stores
57	Loneliness
58	Mental health
59	Caring for family members, e.g. with dementia
60	Getting to know the neighbours and chatting to them outside our houses
61	Seeing neighbours and offering them support
62	Attending religious services and activities
63	DIY in the home and outside, always looking to improve what is already there and decluttering
64	Freedom to live my own life and be myself
65	Having a laugh
66	Listening to the life stories of the people around me because I learn.
67	Making lists of things to do and ticking them off when I have done them
68	Shopping (online and in stores and high streets)
69	Security, e.g. in old age, of health, against social exclusion, against racism, against discrimination and harassment
70	Self analyse, ponder life, what makes me and people around feel good
71	Speaking, listening and knowing before acting

72	Thinking about creative practical things that I enjoy
73	Thinking about the negative impact of some social interactions such as Facebook
74	Watching movies and documentaries at home and at the cinema
75	Enjoying the sunshine
76	Spending time in nature, e.g. in the mountains, in the water, in the countryside, with horses
77	Spending time in the garden, e.g. growing vegetables, tending my garden, reading
78	Looking after my pets, walking them, feeding them, spending time with them and just generally being around them
79	Relaxing at the hairdressers
80	Taking part in mindfulness activities and yoga classes
81	Greeting people I meet when exercising and feeling part of an unofficial club when others say hello
82	Doing workouts at home online, alone or with family and friends
83	Going to classes at the gym, e.g. spin classes, martial arts classes, Pilates
84	Doing exercise by myself, e.g. exercising at my gym, running for head space or with music, swimming regularly at the local pool or in the sea, kayaking, wild swimming, cycling
85	Doing exercise with others, e.g. Parkruns, team events and races as group, cycling in a group, Treasure Trails, volleyball, netball, squash club
86	Taking up a new style of fitness
87	Supporting my teammates in their development and training
88	Meeting other people and making new friends, e.g. through sports, travelling, online
89	Exploring the world and taking in new experiences and places
90	Organising short breaks and holidays to the countryside, coast or cities
91	Travelling by myself
92	The ability to travel anywhere, e.g. to see friends and family, to go with a partner, family and friends to other places or on holiday
93	Travelling on public transport
94	Starting university and meeting new people through societies and classes
95	Chatting and spending time with family and friends on the phone/over Zoom/Facetime
96	Connecting and keeping in touch with friends, family and what is going on in the world on social media, e.g. Instagram, Facebook
97	Face to face interaction
98	Creating virtual groups, e.g. group message chats on WhatsApp, with different groups and communities, virtual book and exercise groups
99	Online learning
100	Interacting online with colleagues and people I come into contact with at work, e.g. online meetings with colleagues
101	Online quizzes and video quizzes with family and friends
102	Sending individual messages over WhatsApp and text to friends
103	Sometimes having conversations with people I like but have never met
104	Using more technology, e.g. computer, mobile phone
105	Video gaming
106	Meeting so many new volunteers and people willing to give their time and energy to help others
107	Organising fundraising events

108	Volunteering in the community, e.g. at a youth group, residential home, church, arts and performance, dog walking, food banks
109	Joining conferences and exhibitions, delivering workshops and speaking publicly about my work with other people (e.g. artists, academics, members of the public) online and in person
110	Colleagues giving and receiving ideas, opportunities and feedback about how we do things together
111	Continuing to work after retirement age - inputting my experience and mentoring others during this difficult time
112	Interacting face to face with colleagues and people I come into contact with at work
113	Socialising with work colleagues, e.g. when travelling for work, going out together
114	Starting a new job and getting to know my co-workers
115	Thinking about what I really want from my employment, work life balance
116	Working overtime
117	Living in a safe home environment
118	Living in a healthy home environment
119	Living in a safe environment outside my home
120	Living in a healthy environment outside my home
121	The ability to use government services, e.g. health, community
122	Being able to do worthwhile paid or unpaid work
123	Being able to make worthwhile plans for myself and my future
124	Being able to put into practice worthwhile plans for myself and my future
125	Being able to express beliefs and opinions which help other people make decisions