The role of social participation in promoting mental health: Exploring the benefits of social support networks.

Master thesis – Sociology: Contemporary Social Problems

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Abstract

This thesis addresses the urgent concerns surrounding the state of mental health care in the Netherlands. With the increasing demand for mental health services, there is a critical need to explore alternative strategies that can effectively support individuals' mental health.

The aim of this study is to investigate the potential impact of social participation on a person's mental health, mediated by having a social support network. To achieve this aim, data from the Longitudinal Internet studies for the Social Sciences (LISS) panel were utilized. The sample consisted of 4884 respondents, providing a diverse representation of the Dutch population. A regression analysis was conducted to examine whether the relationship between social participation and mental health, mediated by the presence of a social support network.

The results of the study revealed that participation in an organization had an indirect contribution to positive mental health outcomes through the effect of having social support networks. This suggests that engaging in volunteering or community activities can foster the development of social connections, which in turn support individuals' mental well-being. However, the direct and total effects of social involvement on mental health were not found to be significant.

These findings have important implications for Dutch policies and initiatives aimed at addressing mental health challenges and alleviating the burden on mental health services. By recognizing the potential benefits of social participation and the role of social support networks, policymakers can develop targeted interventions that promote community engagement and social connections. This can involve creating opportunities for volunteering, supporting community activities, and facilitating the establishment of social support networks.

Ethical consideration.

This study was approved by the ethical review committee of the Faculty of Social Sciences of Utrecht University. The approval has been filed under the number 23-0957.

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1. Introduction

The current state of mental health care in the Netherlands is concerning due to increasing demand and complexity of care needs (Castagna, 2023; Ministerie van Volksgezondheid, Welzijn en Sport, 2022a). With mental disorders affecting around 20% of the population annually, the capacity of Dutch mental health services is limited to treating only 7% in a given year (Kelkboom et al., 2021). As a result, mental health professionals are facing significant challenges due to the high workloads and additionally also due to understaffing (Lang et al., 2022; Van den Broek et al., 2022). This capacity shortage has led to the emergence of long waiting lists, resulting in delays in accessing vital mental health care for numerous individuals. In 2021, 84,187 people were awaiting mental health services, with 39,704 exceeding the acceptable 14-week target (Ministerie van Volksgezondheid, Welzijn en Sport, 2021). It is crucial to acknowledge that prolonged waiting times, over 12 weeks, have detrimental effects on patient outcomes (Reichert & Jacobs, 2018). Finally, the cost of healthcare has also been on the rise, with projections indicating a shift from 3% of the GDP in 1950 to an estimated 26% by 2060 further emphasizing the fact that the current system is unsustainable (Aalbers & Roos, 2022).

The pressing need for a robust, effective, and sustainable mental health care system in the Netherlands becomes evident when considering the aforementioned. The current system overlooks the crucial aspects of prevention and early detection of mental health issues, resulting in many people seeking help at a late stage or not at all (De Nederlandse GGZ, 2022; GGZ Standaarden, n.d.). Unfortunately, this delay can lead to the progression of mental health problems into complex care needs or chronic conditions, causing social exclusion and significantly reducing quality of life (Du & Xu, 2016; Mercy, 2019; Igal et al., 2021; Daneshvari et al., 2021). To effectively address individuals' problems at their source, it is crucial to collaborate with the social domain and local municipalities, proactively tackling these issues closer to home rather than waiting for them to seek help from mental health services (De Nederlandse GGZ, 2022). Therefore, exploring alternative approaches within the social domain is crucial in supporting individuals with their mental health problems.

This recognition is shared by professionals and scientists in the field. For instance, Mariëlle Ploumen, a board member of GGZ Netherlands, and Jim van Os, professor and psychiatrist advocated for a shift in mindset among politicians to recognize that not all complaints automatically necessitate a referral to mental health services and stressed the importance of a broader approach to mental health problems because psychological suffering often has a social or existential cause (De Nederlandse GGZ, 2023; Maassen, 2023). Moreover, Floortje Schepers (psychiatrist and professor) underscores the need for increased social support and participation to help individuals struggling with societal challenges, emphasizing the importance of fostering group cohesion, neighbourhoods, cities, and families for collective support (Van Os & Mulder, 2021; Maassen, 2023; Van Spronsen & Van Os, 2021).

In line with this perspective, the concept of decentralisation in the social domain, introduced in 2015, aimed to address social issues at the local level. The idea is that individuals in vulnerable positions

can be better supported by local authorities, in collaboration with the local community, rather than a distant centralised authority (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2019).
Considering the constraints of the existing mental health system in addressing the multitude of help requests and the emphasis placed by the government on self-reliance and reliance on personal networks to solve problems, it becomes necessary to examine alternative domains that can offer support for individuals in need. As the professionals and scientist in the field suggest, the social domain, particularly within society itself, offers opportunities for such help.

Therefore, the aim of this study is to explore the possible impact of social participation, specifically through volunteering or involvement in community activities, on a person's mental health. Further, the study seeks to determine whether this impact can be explained by the development of a social support network through involvement in such activities. Thus, the primary research question to be answered in this study is as follows: *Does social participation have an impact on mental health through the presence of a social support network?* Prior to answering this question, it is important to verify whether indeed individuals in the Netherlands have sufficient social networks to rely on. It is important to recognize that the effectiveness of the current policies promoting social or informal support as a partial substitute for formal mental healthcare will depend on the actual existence of these social ties. If social ties are not prevalent, it becomes crucial for policies to prioritize increasing and fostering social connections. With this in mind, this study also aims to determine whether individuals actually possess such network. Therefore, the descriptive question is as follows: *How many people have a social support network to fall back on?*

Through investigating the primary research question on the impact of social participation on mental health in the Netherlands, this study aims to generate valuable insights into the role of social networks in promoting mental well-being and potentially offer an alternative or supplementary approach to the formal healthcare system, rooted within communities.
The study seeks to deepen the understanding of the potential benefits associated with social participation and the significance of social support networks in enhancing mental well-being. Additionally, it aims to address the question of how the government can implement measures to enable individuals to build strong social support networks through active engagement in society. By exploring this question and engaging in subsequent discussions, the study aims to uncover policy implications and provide recommendations for government actions. The findings of this study, based on recent and specific data from the Netherlands, hold the potential to inform Dutch policies and initiatives aimed at addressing mental health challenges and alleviating the burden on mental health services. These insights can contribute to the development of policies and initiatives that foster social connections, promote community engagement, and implement preventive interventions, ultimately enhancing the well-being of individuals and society.

2. Theory

The theory section of this study aims to provide a framework that clarifies the fundamental concepts and theoretical foundations needed to understand the relationship between social participation, social support networks and mental well-being. This section begins by providing background on current policies and understanding the prevalence of social support networks. It further explores the relationship between social participation and mental health and highlights the importance of social support networks in facilitating this relationship.

2.1 Social support network

Whereas caring for people, in particular for those with disabilities, was a task for the family and charity until the 1960s, responsibility for this has increasingly shifted to the government (Sociaal Cultureel Planbureau, 2022). In recent years, more emphasis has been placed on the use of informal support, as stated in the recent coalition agreement (coalitieakkoord) (Tweede Kamer der Staten Generaal, 2021). The current legislation is based on the idea that individuals should first try to find a solution within their network before seeking government support (Kromhout et al., 2020). In other words, we should strive towards a more "caring society" also referenced in the coalition agreement 'Looking out for each other' (Omkijken naar elkaar) (Tweede Kamer der Staten Generaal, 2021). To implement these policies effectively, however, it is crucial for people to have a social support network to fall back on.

A *social support network* encompasses the various social relationships and connections individuals have with others, such as family, friends, colleagues, and community members. It encompasses the provision of emotional, informational, and tangible support during challenging times, while also acting as a defence against loneliness. These social connections offer comfort, guidance, assistance, and a feeling of belonging (Zhou, 2015; Harmony Ridge, 2022; Law Insider, n.d).

However, it is essential to acknowledge that not everyone has access to a reliable social support network, highlighting the potential limitations of relying solely on personal strengths or assistance from networks (Kromhout et al., 2020). In the Netherlands, it has been established since 2012 that approximately 96 percent of individuals aged 15 years and older in the Netherlands maintain contact with a family member, friend, or neighbour at least once a week (Centraal Bureau voor de Statistiek, 2020a). However, despite this high frequency of contact, a considerable portion of the Dutch population aged 15 and older, specifically 36 percent for family members and 41 percent for friends or acquaintances, express a desire for more social interactions (Centraal Bureau voor de Statistiek, 2020b). The discrepancy between desired and achieved levels of social contact, is closely linked to the absence of close relationships and to loneliness (Segrin & Passalacqua, 2010; Frieze et al., 1979). The prevalence of loneliness is steadily rising in the Netherlands. In 2021, 11 percent of Dutch individuals aged 15 and older reported feeling strongly lonely, with an additional 32 percent experiencing moderate loneliness. These figures indicate an increase compared to 2019, where the respective percentages were 9 and 26

percent (Centraal Bureau voor de Statistiek, 2022c). According to the trend scenario (2018), this concerning trend is expected to continue, particularly among individuals aged 19 and above who live alone. The implications of this escalating loneliness issue are worrisome, as it is associated with various negative outcomes, including depression, negative self-perception, and health risks (De Visser et al., 2021; Mann et al., 2022; Holt-Lunstad et al., 2015).

Moreover, research indicates that patients with severe psychiatric illnesses often have smaller social networks compared to a control group from the general population (Van der Post et al., 2019). Within the Netherlands, there is an observed correlation between living alone, having a limited social network, and an increased likelihood of involuntary admissions to psychiatric hospitals (Van der Post et al., 2012; Van der Post et al., 2014). It is reasonable to expect that these limited social networks and perceived lack of support among individuals with severe psychiatric disorders not only hinder their already compromised self-reliance but also contribute to a heightened dependence on mental health services (Van der Post et al., 2019).

In conclusion, while the current legislation emphasizes finding solutions within personal networks, it is crucial to acknowledge that not everyone has access to a reliable social support network (Kromhout et al., 2020). A significant proportion of individuals, approximately 40 percent, express a desire for more social interactions, and 43 percent experience varying levels of loneliness (Centraal Bureau voor de Statistiek, 2020b; Centraal Bureau voor de Statistiek, 2022c). The effectiveness of social support as informal mental healthcare provision is conditioned on having these social ties as therefore it is important from a policy perspective to promote social support networks to ensure that individuals have the necessary support and connections to combat feelings of loneliness.

2.2 Social participation on mental health

Social participation refers to the active engagement of individuals in social activities, interactions, and relationships within their community or society. It concerns being involved in various social roles, such as participating in community events, joining clubs or organizations, volunteering, and maintaining social connections (Schormans, 2015; Levasseur et al., 2021). Social participation plays a crucial role in fostering meaningful human interactions and engagement within a community or society which has a positive effect on mental health (Schormans, 2015; Yu et al., 2015). For instance, a study conducted by Lee et al. (2015) demonstrated that active engagement in social groups among older Taiwanese women was associated with fewer depressive symptoms, highlighting the importance of "active participation" in older age. Additionally, social participation is instrumental in the integration of refugees and asylum seekers into their host societies, with significant implications for their mental health (Niemi et al., 2019). The study emphasizes the importance of refugees and asylum seekers having access to and actively participating in key social dimensions within the host societies. By providing access to diverse forms of social resources in everyday life, these efforts contribute to the re-establishment of

social lives and ultimately improve mental health outcomes for refugees and asylum seekers (Niemi et al., 2019).

Mental health is shaped by a complex interplay of genetic, biological, environmental, and sociocultural factors, recognising that cultural perspectives shape its definition (World Health Organization, 2022a; Felman, 2022; Galderisi et al., 2015). Good mental health can be defined as a state of well-being that enables people to cope with the normal stresses of life and function productively (Fusar-Poli et al., 2020). Mental health disorders, on the other hand, refer to a wide range of conditions that affect a person's thinking, mood, behaviour, and overall functioning. These disorders can range in severity, from mild to severe, and can include conditions such as anxiety disorders, depression, bipolar disorder, schizophrenia, and many others. Mental health disorders can have a significant impact on a person's thoughts, emotions, and daily life. (World Health Organization, 2022b; Stein et al., 2021).

Social identity and sense of belonging

There is a relationship between social participation and mental health that is positive, and it can be, among other things, explained by the development of sense of social identity and belonging. For instance, longitudinal intervention studies have demonstrated that individuals who joined community recreation or clinical psychotherapy groups experienced recovery from depression, and this recovery was positively associated with their social identification (Cruwys et al., 2014). Additionally, strong identification with university friendship groups has been found to offer protection against distress and reduce loneliness, which in turn predicts overall mental well-being (McIntyre et al., 2018). These findings are supported by the Social Identity Theory, which suggests that individuals who identify with a particular social group are more likely to experience positive emotions and a sense of belonging (Hogg, 2016).

Also, research shows that social participation provides a sense of *belongingness (*Kawachi and Berkman, 2001; Andonian & MacRae, 2011). In a scoping review conducted by Mahar et al. (2012), exploring the literature on the concept of belonging, they defined it as a personal perception of worth and esteem derived from mutual connections with others. This sense of belonging is built upon shared experiences, beliefs, or personal characteristics, and it encompasses feelings of connectedness to a specific context or referent group, where one actively chooses, desires, and feels a sense of permission to belong (Mahar et al., 2012). Numerous studies have emphasized the positive impact of a sense of belonging and perceiving interdependence with others on mental health (Kawachi and Berkman, 2001; Choenarom, et al., 2005). For instance, the study conducted by Sargent et al. (2002) revealed a significant buffering effect of the sense of belonging against the development of depressive symptoms. These findings further highlight the protective role of a strong sense of belongingness in maintaining mental well-being.

Purpose in life

The relation between social participation and mental health can be partially attributed to the development of a sense of purpose in life. Volunteering, as an example of social participation, has consistently been associated with various positive outcomes, such as heightened social commitment, generativity, deeper self-knowledge, and a sense of mattering and purpose (Schnell & Hoof, 2012; Piliavin & Siegl, 2007; Thoits & Hewitt, 2001).

These studies suggest that feeling good about one's purpose in life, when that purpose is other-oriented, may significantly contribute to both physical and mental well-being. Furthermore, having a sense of purpose is closely related to personal growth, autonomy, environmental mastery, positive interpersonal relationships, and personal self-acceptance (García-Alandete, 2015). Research has consistently demonstrated that cultivating a sense of meaning in life is strongly associated with improved mental health outcomes, including lower rates of depression, sleep problems, and loneliness (Kim et al., 2021; Nygren et al., 2005). Given the relationship between social participation, which promotes a sense of belonging and purpose in life, and the influence of social identity on mental well-being according to the Social Identity Theory, we can posit the hypothesis (H1) that suggests a positive impact of social participation on mental health.

The importance of connection

The concept of belonging, as explored in social identity theory, and the sense of purpose in life are not independent entities but rather intertwined with the acknowledgment, respect, and validation received from others (Spronsen and Van Os, 2021; Rosenbaum et al., 2021; Turner, 1981). For example, through social participation, social relationships are formed, which enhance mental health by fulfilling individuals' attachment needs, providing social approval, access to resources, and emotional gratification (Moen et al., 1992). These connections offer an additional source of existential resilience, where individuals feel part of something greater. They experience a shared significance that leads to recognition and validation. When individuals selflessly integrate themselves into a larger context, the boundaries between people blur, fostering proximity and closeness (Spronsen and Van Os, 2021). Consequently, social participation therefore serves as a means of crating social bonds, fostering personal growth and improving overall well-being.

The social bonds established through participation in a group or organization can also provide social support to individuals. The Social Support Theory posits that a social network can offer emotional, informational, and practical assistance, thereby enhancing an individual's ability to cope with stress and improve their mental health (Lakey & Cohen, 2000). Within a community, the presence of social support and positive role models encourages individuals to adopt healthy behaviours and seek help when needed (Sartorius, 2003). The receipt of emotional, informational, and practical support is considered a manifestation of social capital, which encompasses the various benefits and advantages arising from aspects of social relationships (Machalek & Martin, 2015; Coleman, 1988). Social capital, in this

context, refers to the resources and support available to individuals through their social connections. These resources can include emotional guidance, access to information, and practical assistance, all of which contribute to better mental health outcomes (Machalek & Martin, 2015).

As discussed earlier, social participation plays a crucial role in cultivating a sense of belonging, purpose in life, and social identity, which significantly contributes to overall well-being. However, it is important to recognize that these essential elements of social participation on mental health are provided by the people surrounding an individual. They offer the necessary support and social capital to access both informal and formal assistance, but also the sense of belonging which is nurtured through the support and validation received from others (Rosenbaum et al., 2021; Turner, 1981). In essence, relationships are key, and the presence of a social support network acts as a pivotal factor that bridges the connection between social participation and mental health. These relationships provide the support, understanding, and resources that individuals need to thrive and maintain their mental well-being.

Therefore, hypothesis 2 proposes that: *Social participation positively affects mental health, with the presence of a social support network serving as a mediator.*

3. Data & Methods

3.1 Data

The present research utilizes data obtained from the Longitudinal Internet studies for the Social Sciences (LISS) panel. The LISS panel aims to facilitate scientific, policy, and socially relevant research and is composed of a probability sample of 5,000 households, selected from the population register by Statistics Netherlands (Centraal Bureau voor de Statistiek) (Centerdata, n.d). The LISS panel comprises approximately 7,500 individuals and facilitates the annual LISS Core Study, which collects repeated measures of the same variables for the same households and individuals. The Core Study aims to observe changes in individuals' lives, their responses to life events, and the effects of policy measures and societal changes. Participants complete online questionnaires every month, each lasting around 15 to 30 minutes, and receive compensation for each completed questionnaire. One member of the household provides household data and regularly updates this information. The study focuses on eight questionnaires, each with its own theme (Centerdata.nl, 2022).

The present research makes use of the following questionnaires: 'Health', 'Social integration and leisure', 'Family and Household', 'Work and Schooling', and 'Economic situation: income'. The fifteenth wave of the LISS Core Study, conducted between May and November 2022, is used for this research.

For ethical considerations, it is important to mention that the study underwent an ethical review and received approval from the Ethical Review Board of the Faculty of Social and Behavioural Sciences of Utrecht University. The data obtained from the LISS panel is anonymized and confidential, ensuring the privacy of the participants. Therefore, this study adheres to the ethical guidelines set by the University and the LISS panel.

3.2 Operationalisation and variables

Mental health – dependent variable

Mental health was determined by aggregating the answers to 5 questions asked to the respondent about their emotional state in the past month. Specifically, they were asked to select the answer that best describes how often they experienced (i) feelings of anxiety, (ii) feeling so down nothing could cheer them up, (iii) feeling calm and peaceful, (iv) feeling depressed and gloomy and (v) feeling happy, using the following 6-point Likert scale: (1) Never, (2) seldom, (3) sometimes, (4) often, (5) mostly, (6) continuously. The answer categories of 'feeling calm and peaceful' and 'feeling happy' were reverse coded, whereby a higher score on the 1-6 scale indicates a greater level of a poor mental health perceived by the respondent.

To ensure the internal consistency of the mental health scale used in this study, the Cronbach's alpha coefficient was calculated, which yielded a high value of .909. This indicates that the scale has high reliability. No improvement in the coefficient was observed when any item was removed.

Social participation – independent variable

Social Participation is operationalized through the measurement of an individual's engagement in voluntary work or participation in activities within an organization. Respondents were provided with a list of various organizations, such as sports clubs, cultural associations, humanitarian, or human rights organizations, religious or church organizations, political parties, and more, in order to achieve this objective. Respondents were asked to indicate their current or past (within the last 12 months) affiliation with each of the organizations listed. The response options were categorized into five levels, ranging from 'no connection' to 'performed voluntary work'. To simplify the analysis, the respondents' answers were combined into a dummy variable. A value of 1 was assigned if the respondent selected either option 3 (participated in an activity) or option 5 (performed voluntary work) for at least one of the organizations. Conversely, a value of 0 was assigned if the respondent selected option (1) (no connection), option 2 (donated money), or option 4 (membership). This categorization was based on the reasoning that active participation in activities or voluntary work indicates a higher level of engagement compared to being a mere member or making financial contributions.

The final variable combined was given the value of 0 if participants didn't participate in one of the organisations or 1 if they participated in at least one of the organisations.

Social support network – Mediator.

Social support network is operationalized through the response to a question that assesses the extent to which individuals feel they have a sufficient social support network. Specifically, participants were asked to rate the degree to which they agreed with the following statement: "There are enough people that I can count on in case of a misfortune," using the response options were (1) yes, (2) more or less, (3) no. The variable was used as an ordinal variable. It should be noted that the answer categories of the variable were reversed in their scoring, where a higher score on the 1-3 scale indicates a greater perception of having individuals to rely on in the case of misfortune. This variable functions as an indicator of an individual's social connections and the availability of support in times of need.

3.3 Control variables

To correct for confounding factors in the analysis, several control variables are included in this research. The control variables included are age, gender, educational level, and marital status.

Age is a crucial factor because according to the Disengagement theory, older adults tend to disengage from social roles, resulting in loss of relationships and reduced interaction (Streib et al., 1962). Additionally, middle, and older ages are linked to decreased involvement in voluntary associations, leading to social isolation and loneliness (Li & Ferraro, 2006; Jehoel-Gijsbergs, 2004). Socially disconnected older adults exhibit poorer mental health outcomes only if they feel isolated (Cornwell & Waite, 2009). Age was measured through respondents' self-reported continuous variable of their age.

Gender differences may influence the relationship, as studies have found that social capital has a stronger impact on women's mental health compared to men (Sun et al., 2017). Research suggests that women are more susceptible to mental distress when they are part of a social network characterized by low social support and engagement (Gibney & McGovern, 2011; Chemaitelly et al., 2013; Rueda & Artazcoz, 2009). Cultural constructions of femininity and masculinity may contribute to these disparities, influencing behaviours and expectations in social relationships (Courtenay, 2000). Gender was measured by respondents selecting their gender as (1) male, (2) other or (3) female, with the option for "other" omitted due to a small sample size (N = 18). This variable was converted into a dummy variable: (0) male, (1) female.

The relationship between social participation and mental health may also be influenced by educational levels, as higher education is associated with larger and more stable social networks that provide access to a wider range of support (McPherson et al., 2006; Brandt & Hagge, 2007).

Additionally, individuals with higher education levels tend to have more supportive interpersonal relationships, which can positively impact mental health (Mirowsky & Ross, 2017). Respondents were asked to indicate their highest completed level of education, using a scale ranging (1) Primary, (2) Vmbo, (3) Havo/Vwo (4) Mbo, (5) Hbo, (6) WO.

Marital status is considered as a control variable due to its association with better mental health among married individuals (Soulsby & Bennett, 2015). Marriage provides social support and a sense of belonging, which contributes to improved mental health outcomes (Vaingankar et al., 2020; Waite & Lehrer, 2003). To measure marital status, respondents were asked about their marital status and those who were divorced, separated, widowed, or never married were given the value 0, while those who were married were given the value 1.

3.4 Analysis

In this research, the Statistical Package for the Social Sciences (SPSS), version 28.0, was utilized as the software platform. SPSS provides a range of statistical functions and tools that are widely used in social science research. The mediation analysis was conducted using the PROCESS macro developed by Hayes (Hayes, 2013) to examine the relationships between variables and test for mediation effects. Specifically, the mediation analysis was performed to investigate the mediating role of a variable between an independent variable and a dependent variable.

To conduct the mediation analysis, two separate analyses were performed to assess the mediation effects. The first analysis involved conducting the mediation analysis without including any control variables. This initial analysis allowed for an examination of the direct and indirect effects of the variables of interest without accounting for the potential confounding influence of other factors. Subsequently, the second analysis was conducted, incorporating control variables into the mediation model. The inclusion of control variables allowed for the adjustment of potential confounding factors

and enhanced the accuracy of the mediation analysis by isolating the specific relationships between the independent, mediating, and dependent variables.

All the main assumptions of linear regression models were examined, and no significant violations were found.

4. Results

4.1 Descriptive analysis

Table 1 shows the means, standard deviation, and ranges for all variables. The sample consisted of 4884 respondents, with a balanced sample in terms of gender, with 51% women. The proportion of married respondents is 44%. The age of the respondents ranged from 16 to 96 years, with a mean age of 53.72 (SD = 18.38). The mean education level of respondents was 3.57 (SD = 1.66) on a scale from 1 (primary school) to 6 (university degree). This suggests that the majority of respondents had at least a secondary education level. Respondents' mean score for mental health was 4.70 (SD = .83) on a scale from 1 to 6, indicating a relatively high level of mental health overall. The mean score for people having a social support network is 1.68 (SD = .56), on a scale from 0 to 2, indicating that respondents on average have some people to fall back on in times of need. In terms of social participation, Table 1 shows that slightly over half of the participants (59%) did not participate in any community activities.

Table 1. Descriptive statistics

	Min	Max	Mean	SD
Mental health	1	6	4.70	.83
Social support network	0	2	1.68	.56
Participation	0	1	.41	.49
Age	16	96	53.72	18.38
Gender 1 = female	0	1	.51	
Marital status 1 = married	0	1	.44	
Education level	1	6	3.57	1.66
Valid N	4884			

4.2 Regression analysis

A mediation analysis was conducted to examine the indirect relationship between social participation and mental health, through having a social support network. The results are presented in Table 2 and Table 3, with the former focusing on the analysis without control variables and the latter on the analysis that includes the control variables age, gender, marital status, and education level. Additionally, the findings are summarized in Figure 1 (representing the results of Table 1) and Figure 2 (representing the results of Table 2).

Model 1 of Table 2 presents the effect between the independent variable and the mediator. The model is significant, accounting for 0.17% of the variances in the dependent variable (R^2 = .0017, F = 9.3845, p = .0022). The effect between social participation and having a social support network is medium and positive, indicating a significant relationship (β = .0473, t = 3.0634, p = .0022) (Nieminen, 2022).

Model 1 in Table 3 explains the same effect, including the control variables. The model is also significant and explains slightly less variance than the model without the controls, namely 1.3% (R^2 = .0134, F = 13.2710, p = .000). The effect between social participation and having a social support network is smaller compared to Table 2 but remains positive and significant (β = .0374, t = 2.2690, p = .0233). Upon examining the control variables in Table 3, it is observed that age has an insignificant effect on having a social support network (β = 0.0003, 0.5685, p = 0.5697). On the other hand, gender demonstrates a small yet significant effect (β = 0.0552, t = 3.4149, p = .0006), indicating that being female influences the likelihood of having a social support network. Similarly, marital status shows a small but significant effect (β = .0706, t = 4.1990, p = .0000), suggesting that being married is associated with higher levels of having a social support network. Additionally, education level exhibits a significant effect as well (β = .0295, t = 5.3702, p = .0000), indicating that higher levels of education are associated with higher levels of having a social support network.

Model 2 in Table 2, which examined the direct effect, is significant and accounted for 10.14% of the variance of the dependent variable (R^2 = .1014, F = 167.2937, p = .0000) indicating that the combination of social participation and having a social support network explains a moderate portion of the variability on mental health. The effect of social participation is negative but not significant (β = -.0266, t = -1.0466, p = .2954). However, the effect of the mediator is medium and positive, indicating that having a social support network has a positive effect on mental health (β = .4686, t = 24.9187, p = .0000).

Comparing with the findings in Table 2, Model 2 in Table 3 incorporated the control variables and demonstrated a 17% of variance in the dependent variable (R^2 =.1707). The model is significant (F = 167.2937, p = .0000).

The effect of social participation on mental health remained negative and insignificant (β = -.0385, t = 2.2690, p = .0233), while the effect of having a social support network became slightly smaller but remains significant (β = .4505, t = 23.3561, p = .0000). Regarding the control variable age, this is opposed to model 1 in Table 2, as it is significant and has a small positive effect (β = .0086, t = 13.6890, p =.0000). In terms of gender, this effect is contrary to model 1 in Table 2, as it is negative and significant (β = -.1829, t =-8.3858, p = .0000). Marital status has a small but significant effect (β = .1645, t = 7.2497, p = .0000). Additionally, education level demonstrates a significant and small effect (β = .0200, t = 2.6854, p =.0073).

In Model 3 of Table 2, the findings revealed an insignificant model with no accounted variance (R^2 = .0000, F = .0003, p = .9860). Furthermore, in line with this, the total effect of social participation on mental health is also insignificant (β = -.0004, t = -.0175, p = .9860).

Model 3 in Table 3, as in Table 2, is significant (F = 82.4480, p = .0000). However, when considering the control variables, the effect of social participation on mental health remains non-significant (β = -.0217, t = -.9265, p = .3542). When including the control variables to the model, the explained variances increased to 7.79% (R^2 = .0779). Age showed a small but significant effect (β = .0087, t = 13.1643, p = .0000), indicating its influence on mental health scores. Moreover, gender has a significant effect as well (β = -.1580, t = -6.8800, p = .0000) but with a negative and small effect. This implies that being a female is associated with slightly higher scores of mental health compared to being male. The effect of marital status is also significant (β = .1963, t = 8.2203, p = 0.0000), indicating that being married is associated with higher mental health scores. Additionally, the effect for education level is significant with a small effect (β = 0.0333, t = 4.2578, p = 0.0000). This implies that education level significantly influences mental health, and higher levels of education are associated with slightly higher mental health scores.

In both analyses, the indirect effects are significant. In Table 2, the indirect effect of social participation on mental health, mediated by having a social support network is small but significant (β = .0222, 95% CI [.0078, .0367]). When including the control variable, presented in Table 3, the effect becomes smaller but remains significant (β = .0169, 95% CI [.0023, .0315]).

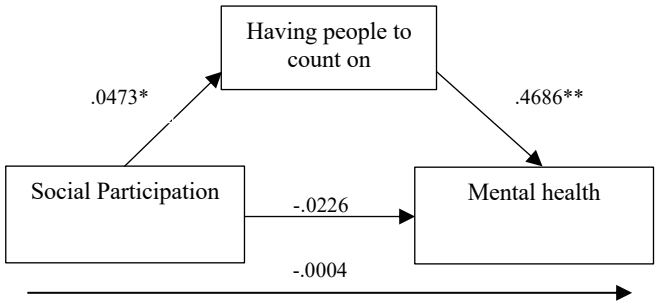
To summarize, the study findings support the hypothesis that social participation has an indirect impact on mental health through the presence of a social support network. However, the direct and total effects of social participation on mental health were found to be statistically insignificant, indicating that hypothesis 1 is not confirmed. Moreover, the study identifies gender, marital status, and education level as significant factors that contribute to the presence of a social support network and overall mental well-being.

Table 2. Part 1 Mediation analysis

		β	SE	T Value	P value	Percentile bootstrap 95% confidence interval	
						Lower	Upper
Model 1 X→M							
	Constant	1.6650**	.0099	168.6742	.000		
	Social Participation	.0473*	.0155	3.0634	.0022		
	R^2	.0017					
	F	9.3845*					
Model 2 X & M → Y (Direct effect)							
	Constant	3.9320**	.0342	114.9420	.0000		
	Social participation	-.0226	.0216	-1.0466	.2954		
	Social support network	.4686**	.0188	24.9187	.0000		
	R^2	.1014					
	F	310.4719					
Model 3 X→Y (Total effect)							
	Constant	4.7123**	.0145	324.3647	.0000		
	Social participation	-.0004	.0227	-.0175	.9860		
	R^2	.0000					
	F	.0003					
X→M→Y Indirect effect		.0222	.0072			.0085	.0364

Note. Unstandardised regression coefficients are described**.** **: p<.001; *: p<.05.

Figure 1: Mediation analysis



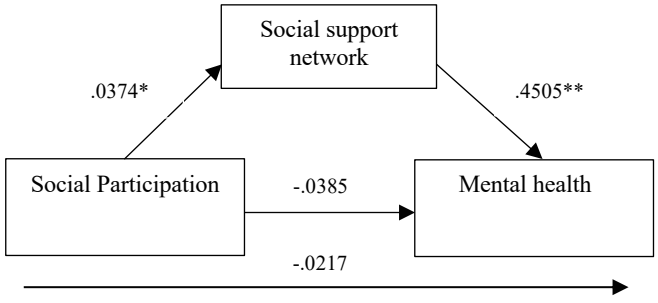
Note. Unstandardised regression coefficients are described**.** ***: p<.001; **: p<.05.
Figure 2: *Mediation analysis with control variables*

Table 3. Part 2 Mediation analysis

		β	SE	T Value	P value	Percentile bootstrap 95% confidence interval	
						Lower	Upper
Model 1 X→M							
	Constant	1.4747**	.0373	39.5077	.0000		
	Social Participation	.0374*	.0165	2.2690	.0233		
	Age	.0003	.0005	.5685	.5697		
	Gender [1]	.0552*	.0162	3.4149	.0006		
	Marital status [2]	.0706**	.0168	4.1990	.0000		
	Education level	.0295**	.0055	5.3702	.0000		
	R^2	.0134					
	F	13.2710**					
Model 2 X & M → Y (Direct effect)							
	Constant	3.4405**	.0578	59.5533	.0000		
	Social participation	-.0385	.0165	2.2690	.0829		
	Social support network	.4505**	.0193	23.3561	.0000		
	Age	.0086**	.0006	13.6890	.0000		
	Gender [1]	-.1829**	.0218	-8.3858	.0000		
	Marital status [2]	.1645**	.0227	7.2497	.0000		
	Education level	.0200*	.0074	2.6854	.0073		
	R^2	.1707					
	F	167.2937**					
Model 3 X→Y (Total effect)							
	Constant	4.1049**	.0530	77.4257	.0000		
	Social participation	-.0217	.0234	-.9265	.3542		
	Age	.0087**	.0007	13.1643	.0000		
	Gender [1]	-.1580**	.0230	-.6.8800	.0000		
	Marital status [2]	.1963**	.0239	8.2203	.0000		
	Education level	.0333**	.0078	4.2578	.0000		
	R^2	.0779					
	F	82.4480**					
X→M→Y (Indirect effect)		.0169*	.0074			.0023	.0314

Note. Unstandardised regression coefficients are described**.** **: p<.001; *: p<.05.
[1]Reference category = female, [2]Reference category = married

Figure 2: Mediation analysis including control variables.



Note. Unstandardised regression coefficients are described**.** Controlled for: age, gender, education level and marital status. **: p<.001; *: p<.05.

5. Conclusion and discussion

The results of this study shed a light on the function of social networks and social participation in fostering mental well-being. The findings of this study provide valuable insights into the role of social networks and social participation in promoting mental well-being. The results suggest that participation in an organization indirectly contributes to better or more positive mental health outcomes, through the mediating effect of having a social support network.

These findings align with previous research, which highlights the positive influence of social participation on mental health by providing a sense of belongingness, perceiving interdependence with others, and accessing emotional support (Kawachi and Berkman, 2001; Choenoarom et al., 2005; Andonian & MacRae, 2011). The Social Identity Theory further supports these results, as it suggests that individuals who identify with a particular social group are more likely to experience positive emotions and a sense of belonging (Hogg, 2016). When individuals engage in social activities and build connections with others, they have increased access to emotional support, advice, and assistance during challenging situations. This underscores the fundamental importance of social support networks in promoting mental well-being and provides valuable insights into the complex interplay between social participation and mental health outcomes.

However, it is important to acknowledge that not everyone has access to such networks (Kromhout et al., 2020). This study reveals that approximately 40 percent of individuals express a desire for more social interactions, and 43 percent experience varying levels of loneliness (Centraal Bureau voor de Statistiek, 2020b; Centraal Bureau voor de Statistiek, 2022c). Therefore, it is crucial to recognize that not everyone can depend solely on their personal networks for support, despite the expectations set by current policies promoting self-reliance and reliance on personal networks (Tweede Kamer der Staten Generaal, 2021).

Contrary to the expectation that social participation has a direct positive effect on mental health (H1), this does not appear to be significant. This suggests that engaging in activities such as volunteering, being active in organizations, or participating in social groups may not directly influence an individual's mental well-being. This result challenges the commonly held belief that social participation alone is sufficient to promote mental health. These findings underscore the importance of considering social support networks as a crucial factor in understanding the relationship between social participation and mental health. While the direct effect of social participation was not significant, the presence of a supportive network can still contribute to positive mental health outcomes. This suggests that focusing solely on increasing social participation may not be sufficient to improve mental well-being. Instead, efforts should be directed towards facilitating the formation of strong social support networks within various social participation contexts.

From a methodological or statistical perspective, an ongoing concern in the mediation literature is whether it is meaningful to discuss the mediation effect when there is neither a direct effect nor a total

effect present. In the present study, the results of the mediation analysis indicate the absence of both a total effect and a direct effect. According to the first of the four criteria from Baron and Kenny's (1986) approach to Statistical Mediation Analysis it is necessary that the effect between the independent and the dependent variable is significant. This requirement aligns with the fundamental concept that a mediator serves as a mechanism through which the effect of an independent variable is transmitted to a dependent variable, aiding in the understanding of the relationship between the two variables. Consequently, if no relationship exists between the independent and dependent variables, there is no basis for mediation (Pardo & Román, 2013; Baron and Kenny, 1986).

On the other hand, though, there is also a consensus among statisticians that the total effect should not serve as a decisive criterion for mediation analysis (MacKinnon et al., 2000; De Boeck, 2017, Hayes, 2009; Shrout & Bolger, 2002). There are a few reasons why mediation can possibly exist even if there is not a significant relationship between the independent and the dependent variable. First, the significance testing of the total effect is deemed unnecessary as it is unrelated to the presence of an indirect effect. Detecting an indirect effect is a separate statistical test and can be observed independently of the significance of the total effect (Agler and De Boeck, 2017). Second, when there are inconsistent results in a mediation analysis there could also be a suppression effect being present when the direct effect and the indirect effect have opposites sign (MacKinnon et al., 2000; Zhao et al., 2010). In this study the direct effect of social participation on mental health is negative and the indirect effect mediated by having a social support network would be positive. Combined, these two hypothetical effects may cancel each other out, resulting in a total effect of social participation on mental health equal to zero. While it seems logical that an effect must be present in order to talk about mediation, this does not necessarily mandate the presence of a statistically significant relationship between X and Y. Thus, the absence of a direct effect or a total effect should not preclude the examination of indirect effects in a mediation analysis. Acknowledging that detecting an indirect effect requires a separate statistical test and can be observed independently of the significance of the total effect and the possibility of a suppression effect, it is still possible to affirm the presence of a mediating effect of having a social support network in the relationship between social participation and mental health. These findings underscore the crucial role played by social support networks in promoting mental well-being and provide valuable insights into the complex interplay between social participation and mental health outcomes. When individuals engage in social activities and establish connections with others, they gain increased access to emotional support, advice, and assistance during challenging situations. The study emphasizes the importance of addressing the limitations of personal networks and exploring alternative approaches, such as engaging in community activities and fostering social connections, to enhance social support.

5.1 Limitations and suggestions for future research

A potential limitation of the study is the non-representative nature of the sample, which may consist of individuals with above-average values for the variables under investigation. The study revealed a significantly high overall score for social support network, with a mean score of 1.68 out of 2. This finding contradicts larger-scale research conducted by the Centraal Bureau voor de Statistiek (2022c) and the Rijksinstituut voor Volksgezondheid en Milieu (2018), which indicated that a considerable percentage of individuals (ranging from 36 to 41 percent) expressed a desire for increased social interactions, and 32 percent reported experiencing severe loneliness. Furthermore, the mean score for mental health in the study was notably high, with a mean score of 4.7 out of 6. This contrasts with data from Trimbos Instituut (2022), which suggests that 26 percent of individuals encountered mental health issues within the past 12 months.

This discrepancy suggests the presence of self-selection bias, as individuals with lower mental health may be less inclined to participate in demanding or burdensome studies (Young et al., 2020; Momen et al., 2022). Consequently, the study findings may not be fully representative of the population, which limits its external validity. For further research, it is important to address this limitation by actively seeking participants with a broader range of mental health statuses and varying levels of having a social support network. This can be achieved through targeted recruitment strategies or by utilizing sampling methods that capture a more diverse population, such as stratified sampling (Frost, 2023). By including individuals with diverse mental health profiles and varying levels of social support networks, future studies can provide a more comprehensive understanding of the relationships under investigation and improve the generalizability of findings.

The self-reported measurement data used in this study have another limitation, as they may introduce some self-reported bias (Marsh, 1993). Measures related to mental health, social support, and levels of social participation may be susceptible to social desirability bias. Social desirability bias occurs when respondents provide answers that are socially desirable. This bias can impact the accuracy and reliability of the responses and introduce measurement errors into the data, potentially leading to incorrect research findings (Latkin et al., 2017; Althubaiti, 2016). For instance, respondents may be influenced consciously or unconsciously by the notion of "social desirability," leading them to report higher levels of social participation to align with social norms or expectations. Research examining the alignment between self-reported levels of community and organizational participation and actual recorded acts of participation has shown that individuals tend to report more positively on their engagement in various organizing activities than their actual participation levels in community organizing activities (Christens et al., 2016). To mitigate social desirability bias in future research, it is important to validate the self-reporting instrument before its implementation for data collection. One effective approach is to utilize measurement scales like the Marlowe–Crowne Social Desirability Scale (MC–SDS) to identify and measure the influence of social desirability on self-reported information (Althubaiti, 2016). The MC–SDS is a 33-item self-report questionnaire designed to assess respondents'

concerns with social approval (Crowne & Marlowe, 1960). By incorporating this scale, researchers can gain insights into the extent to which social desirability bias may impact the reported data and ensure the accuracy and validity of the findings.

Another limitation of this study is the measurement of social participation, which was conducted using a set of 12 diverse organizations. While this selection already encompasses a significant range of options for social participation, further research is necessary to comprehend the varying impact of these specific organizations on mental health outcomes, considering the mediating role of social support networks. Each organization may provide unique experiences, opportunities, and support systems that can affect individuals' well-being in distinct ways. It would add value by comparing the findings across these 12 organizations to identify any patterns, differences, or similarities in their influence on mental health. Such analysis can assist in identifying organizations that have a particularly strong positive impact on mental health, as well as those that may have limited or even negative effects.

6. Policy advice

As mentioned earlier, the Dutch mental health system is facing challenges in meeting the growing demands for care (Castagna, 2023). Relying solely on healthcare provision is no longer sustainable. Professionals and scientists agree that a more comprehensive approach to mental health issues involving society as a whole is necessary (De Nederlandse GGZ, 2023; Maassen, 2023; Van Spronsen & Van Os, 2021). This aligns with the government's vision of fostering self-reliance and promoting the utilization of informal support (Tweede Kamer der Staten Generaal, 2021). It is crucial to explore alternative avenues that can alleviate the strain on the formal healthcare system. However, it is the government's duty to facilitate the establishment of places and initiatives where individuals can seek help outside of traditional mental healthcare. Recognizing the significance of creating such spaces, where people can find support from others in the absence of a social support network, becomes vital in fostering the development of a social support network within these settings.

One proposed solution is the establishment of Recovery Academies and Self-Regulation Centers. These facilities are designed to be accessible to all and provide support to individuals with psychological and psychosocial vulnerabilities, including those who are reluctant to seek help or face barriers to accessing traditional care (MIND, 2017). These centres offer visitors the opportunity to engage in volunteer positions, with an average of 50 volunteer work opportunities available. They also offer various initiatives to assist individuals in taking steps towards employment, such as work experience placements, job application training, and vocational guidance programs. Encouraging individuals to participate in volunteer work is recommended based on the research findings, as it helps to develop a social support network and enhances mental well-being. Self-regulation centres and recovery academies also offer a range of recovery courses and activities that empower individuals to lead fulfilling lives despite their psychological vulnerabilities. By engaging with peers who share similar experiences and trained peer support workers, individuals receive support, recognition, validation, and hope. Participating in these activities fosters a sense of belonging, which has been shown to positively impact mental health (Kawachi and Berkman, 2001; Choenoarom et al., 2005).

Research conducted by Mind (2013) indicates that individuals who participate in such initiatives use regular mental health care services less frequently, aligning with the objective of this study. These initiatives contribute to psychological well-being and reduce loneliness (MIND, 2017). Therefore, it is crucial to facilitate nationwide coverage of self-regulation centres, as stated in the Integral Care Agreement (Intergraal Zorg Akkoord). This agreement commits to establishing accessible support points, including self-regulation centres, that every resident can access within five years (ActiZ et al., 2022). However, MIND (2023) highlights that this commitment does not guarantee sufficient support. The funding for these centres falls under the Municipal Social Support Act (WMO), which varies greatly among municipalities. Requiring annual funding reapplications creates uncertainty and consumes time. To address these challenges, self-regulation centres should receive dedicated WMO budgets and multi-year contracts (Kompassie, 2023).

In addition to encouraging volunteer work in self-regulation centers, policymakers should collaborate with community organizations and employers to develop meaningful volunteer opportunities tailored to the needs and abilities of individuals with mental health challenges. By incentivizing employers to offer volunteer positions and supporting community organizations in designing volunteer programs, the government can empower individuals, promoting their sense of purpose, social integration, sense of belonging, and ultimately contributing to improved mental health (Cruwys et al., 2014; Kawachi and Berkman, 2001; Andonian & MacRae, 2011; Mahar et al., 2012). Volunteering not only benefits the community but also offers individuals the chance to engage in meaningful activities, establish social connections, enhance self-knowledge, and cultivate a sense of mattering and purpose (Schnell & Hoof, 2012; Piliavin & Siegl, 2007; Thoits & Hewitt, 2001).

Lastly, the utilization of e-communities is recommended. Instead of solely relying on traditional one-on-one, symptom-reduction mental health care, there should be a partial shift towards a public mental health network that incorporates complementary e-communities. These e-communities serve as platforms offering information, self-help resources, and peer support (Van Os et al., 2019). It is important to recognize that the Internet provides a means for self-expression and connecting with others, making virtual support groups a productive and effective component of treatment and prevention, promoting healthy social interaction (Whitlock et al., 2006). Although this recommendation is not directly associated with (in-person) social participation, it emphasizes the significance of participating in a community and deriving support and a sense of belonging. According to the findings of this research, this has a positive effect on mental health. Additionally, as we discussed earlier, traditional mental health care services can only accommodate about 7% of the population, whereas complementary e-communities have the potential to support up to 20% (Van Os et al., 2019). This aligns with the demonstrated need to reduce the burden on formal mental health care by exploring alternative community-based, prevention-oriented initiatives like e-communities. Unfortunately, these initiatives currently lack stable funding (Van Os et al., 2019), which is why the recommendation is to facilitate these e-communities by providing reliable financial support. Although financial considerations are involved in all of these policy recommendations, it is important to recognize that the current mental health care system carries substantial costs (Aalbers & Roos, 2022). Nonetheless, it is worth considering that implementing these recommendations may lead to cost savings by reducing the dependence on traditional mental health services to address help requests. To further evaluate the potential cost-effectiveness of these initiatives, conducting research on their cost-benefit analysis is highly recommended.

Through the implementation of these policy recommendations, the Dutch mental health system can transition towards a more comprehensive and community-based approach, fostering self-reliance, social inclusion, and improved mental well-being. This approach not only benefits individuals but also contributes to the long-term sustainability and effectiveness of mental health services.

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Appendix

Syntax

```
* Encoding: UTF-8.
*Recode mental health into different variable

RECODE ch22o011 (1=6) (2=5) (3=4) (4=3) (5=2) (6=1) INTO Anxious.
EXECUTE.


RECODE ch22o012 (1=6) (2=5) (3=4) (4=3) (5=2) (6=1) INTO Down.
EXECUTE.

RECODE ch22o014 (1=6) (2=5) (3=4) (4=3) (5=2) (6=1) INTO Depressed.
EXECUTE.


* Chronbachs alpha mental health = .882 not higher when items are deleted

RELIABILITY
  /VARIABLES=ch22o013 ch22o015 Anxious Down Depressed
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL MEANS.

* Social participation Chronbach's Alpha = .909

COMPUTE Mentalhealth=MEAN(ch22o013, ch22o015, Anxious, Down, Depressed).
EXECUTE.

*X variable social participation
*Compute variable Sportclub

IF  (cs22o005 = 0  & cs22o007 = 0) Sport=0.
EXECUTE.

IF  (cs22o005 = 1  | cs22o007 = 1) Sport=1.
EXECUTE.

*Compute variable cultural

IF  (cs22o010 = 0  & cs22o012 = 0) Cultural=0.
EXECUTE.

IF  (cs22o010 = 1   |  cs22o012 = 1) Cultural=1.
EXECUTE.

*Compute variable tradeunion
IF  (cs22o015 = 0  & cs22o017 = 0) Tradeuni=0.
EXECUTE.

IF  (cs22o015 = 1   |  cs22o017 = 1) Tradeuni=1.
EXECUTE.
```

```
*Compute variable businessthing

IF  (cs22o020 = 0  & cs22o022 = 0) Business=0.
EXECUTE.

IF  (cs22o020 = 1  |  cs22o022 = 1) Business=1.
EXECUTE.

*Compute variable consumer organization and automobile organisation

IF  (cs22o025 = 0  & cs22o027 = 0) Consumerorg=0.
EXECUTE.

IF  (cs22o025 = 1   |  cs22o027 = 1) Consumerorg=1.
EXECUTE.


*Compute variable humanitarian organisations and human rights

IF  (cs22o030 = 0  & cs22o032 = 0) Humantiarionorg=0.
EXECUTE.

IF  (cs22o030 = 1   |  cs22o032 = 1) Humantiarionorg=1.
EXECUTE.

*Compute variable mirgration org

IF  (cs22o525 = 0  & cs22o527 = 0) Migrationorg=0.
EXECUTE.

IF  (cs22o525 = 1   |  cs22o527 = 1) Migrationorg=1.
EXECUTE.

*COmpute variable environment,peace and animal org

IF  (cs22o035 = 0  & cs22o037 = 0) Environmentorg=0.
EXECUTE.

IF  (cs22o035 = 1  |  cs22o037 = 1) Environmentorg=1.
EXECUTE.

*Compute variable Religious and church org

IF  (cs22o040 = 0  & cs22o042 = 0) Religiousorg=0.
EXECUTE.

IF  (cs22o040 = 1  | cs22o042 = 1) Religiousorg=1.
EXECUTE.

*Compute variable Political org

IF  (cs22o045 = 0  & cs22o047 = 0) Politicalorg=0.
EXECUTE.
```

```
IF  (cs22o045 = 1  |  cs22o047 = 1) Politicalorg=1.
EXECUTE.

*Compute Science education teacher parent org

IF  (cs22o050 = 0  & cs22o052 = 0) Scienceeducorg=0.
EXECUTE.

IF  (cs22o050 = 1  |  cs22o052 = 1) Scienceeducorg=1.
EXECUTE.

*Compute Socialsociety

IF  (cs22o055 = 0  & cs22o057 = 0) Socialsocietyorg=0.
EXECUTE.

IF  (cs22o055 = 1   |  cs22o057 = 1) Socialsocietyorg=1.
EXECUTE.

*Compute variable otherorg

IF  (cs22o060 = 0  & cs22o062 = 0 ) Otherorg=0.
EXECUTE.

IF  (cs22o060 = 1  |  cs22o062 = 1) Otherorg=1.
EXECUTE.

*Recode control variables
*Gender 0 = male and 1 = female

RECODE geslacht (1=0) (2=1) INTO Geslachtmv.
EXECUTE.

*Recode burgerstatus 0 = not married 1 = married

RECODE burgstat (1=1) (2=0) (3=0) (4=0) (5=0) INTO Burgstatus.
EXECUTE.

*Recode nettincome per person 1= low income --> 12--> high income 13,14 = missing

RECODE nettocat (0=1) (1=2) (2=3) (4=5) (5=6) (6=7) (7=8) (9=10) (10=11) (12=13) (13=SYSMIS)
    (14=SYSMIS) INTO NetIncomepp.
EXECUTE.

*Recode language spoken at home 0 = dutch, 1 = other language

RECODE cr22o090 (1=0) (2=1) INTO Language.
EXECUTE.

RECODE cs22o285 (3=0) (2=1) (1=2) INTO Mpeopleback.
EXECUTE.

DATASET ACTIVATE DataSet1.
IF  (Sport  =  1  | Cultural = 1 | Tradeuni = 1  | Business = 1
```

```
   | Consumerorg = 1 | Humantiarionorg = 1 | Migrationorg = 1 | Environmentorg = 1 | Religiousorg =
1
   | Politicalorg = 1 | Scienceeducorg = 1 | Socialsocietyorg = 1 | Otherorg = 1) Participation=1.
EXECUTE.

IF  (Sport  =  0  | Cultural = 0 | Tradeuni = 0  | Business = 0
   | Consumerorg = 0 | Humantiarionorg = 0 | Migrationorg = 0 | Environmentorg = 0 | Religiousorg =
0
   | Politicalorg = 0 | Scienceeducorg = 0 | Socialsocietyorg = 0 | Otherorg = 0) Participation = 2.
EXECUTE.


DESCRIPTIVES VARIABLES=Participation
  /STATISTICS=MEAN STDDEV MIN MAX.

FREQUENCIES VARIABLES=cs22o003 cs22o004 cs22o005 cs22o006 cs22o007 cs22o008
cs22o009 cs22o010
   cs22o011 cs22o012 cs22o013 cs22o014 cs22o015 cs22o016 cs22o017 cs22o018 cs22o019
cs22o020 cs22o021
   cs22o022 cs22o023 cs22o024 cs22o025 cs22o026 cs22o027 cs22o028 cs22o029 cs22o030
cs22o031 cs22o032
   cs22o523 cs22o524 cs22o525 cs22o526 cs22o527 cs22o033 cs22o034 cs22o035 cs22o036
cs22o037 cs22o038
   cs22o039 cs22o040 cs22o041 cs22o042 cs22o043 cs22o044 cs22o045 cs22o046 cs22o047
cs22o048 cs22o049
   cs22o050 cs22o051 cs22o052 cs22o053 cs22o054 cs22o055 cs22o056 cs22o057 cs22o058
cs22o059 cs22o060
   cs22o061 cs22o062
  /ORDER=ANALYSIS.


FREQUENCIES VARIABLES=cs22o005 cs22o007 cs22o010 cs22o012 cs22o015 cs22o017
cs22o020 cs22o022
   cs22o025 cs22o027 cs22o030 cs22o032 cs22o525 cs22o527 cs22o035 cs22o037 cs22o040
cs22o042 cs22o045
   cs22o047 cs22o050 cs22o052 cs22o055 cs22o057 cs22o060 cs22o062
  /ORDER=ANALYSIS.

IF (cs22o005 = 0 | cs22o007 = 0 |  cs22o010 = 0 | cs22o012 = 0 | cs22o015 = 0 | cs22o017  = 0 |
cs22o020 = 0 | cs22o022 = 0 |
   cs22o025 =0 | cs22o027 = 0 | cs22o030 = 0 | cs22o032 = 0 | cs22o525 =0 | cs22o527 =0 | cs22o035
=0 | cs22o037 =0 | cs22o040 =0 | cs22o042 =0 | cs22o045 =0 |
   cs22o047 =0 | cs22o050 =0 | cs22o052 =0 | cs22o055 =0 | cs22o057 =0 | cs22o060 =0 | cs22o062
=0) participation = 0.
Execute.

IF (cs22o005 = 1 | cs22o007 = 1 |  cs22o010 = 1 | cs22o012 =1 | cs22o015 =1 | cs22o017  =1 |
cs22o020 =1 | cs22o022 =1 |
   cs22o025 = 1 | cs22o027 = 1 | cs22o030 =1 | cs22o032 =1 | cs22o525 =1 | cs22o527 =1 | cs22o035
=1 | cs22o037 =1 | cs22o040 =1 | cs22o042 =1 | cs22o045 =1 |
   cs22o047 =1 | cs22o050 =1 | cs22o052 =1 | cs22o055 =1 | cs22o057 =1 | cs22o060 =1 | cs22o062
=1) participation = 1.
EXECUTE.
```

Variables dataset

Social participation:

Code numbers: cs22o003 - cs22o062

We now list a number of organizations that you are free to join.

Can you indicate, for each of the organizations listed, what applies to you at this moment or has applied to you over the past 12 months?

More than one answer possible

A sportsclub
A cultural association or hobby club
A trade union
A business, professional or agrarian organization
A consumers' organization or automobile club
An organization for humanitarian aid or human rights
An organization for migrants
An organization for environmental protection, peace organization or animal rights organization
A religious or church organization
A political party
A science, education, teachers' or parents' association
Asocial society; an association for youth, pensioners/senior citizens, women; or friends' clubs
Other organizations that you can freely join

1 = no connection
2 = donated money
3 = participated in an activity 4 = member
5 = performed voluntary work

Mental health:

Code numbers: ch22o011 – ch22o015

The following questions are about how you felt over the past month.
Please choose the answer that best describes how you felt during this past month.

This past month ....

Question type: Table *Answer type:* Radio buttons *Sub-questions:*

ch22o011 I felt very anxious.

ch22o012 I felt so down that nothing could cheer me up.

ch22o013 I felt calm and peaceful.

ch22o014 I felt depressed and gloomy.

ch22o015 I felt happy. *Categories:*

1. Never
2. Seldom
3. Sometimes
4. Often
5. Mostly
6. Continuously

Social support network:

Code number: cs22o285

To what extent do the following statements apply to you, based on how you are feeling at present?

There are enough people I can count on in case of a misfortune.

1. Yes
2. More or less
3. No

P.O. Box 80140, 3508 TC Utrecht The Board of the Faculty of Social and Behavioural Sciences Utrecht University P.O. Box 80.140 3508 TC Utrecht		**Faculty of Social and Behavioural Sciences** Faculty Support Office Ethics Committee **Visiting Address** Padualaan 14 3584 CH Utrecht
Our Description	23-0742	
Telephone	030 253 46 33	
E-mail	FETC-fsw@uu.nl	
Date	19 March 2023	
Subject	Ethical approval	

ETHICAL APPROVAL

Study: Sociology contemporary Social Problems

Principal investigator: N. van der Molen

Supervisor: Paulina Pankowska

The study is approved by the Ethical Review Board of the Faculty of Social and Behavioural Sciences of Utrecht University. The approval is based on the documents sent by the researchers as requested in the form of the Ethics committee and filed under number 23-0742. The approval is valid through 27 July 2023. The approval of the Ethical Review Board concerns ethical aspects, as well as data management and privacy issues (including the GDPR). It should be noticed that any changes in the research design oblige a renewed review by the Ethical Review Board.

Yours sincerely,

Peter van der Heijden, Ph.D.
Chair
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