The Association Between Social Identity and Well-being in ASD: A Systematic Review

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Abstract

Social identification, the way in which individuals come to identify themselves as a member of a social group has been found to have positive effects on the well-being of individuals diagnosed with disabilities. As Autistic Spectrum Disorder (ASD) is characterized by deficits in social belonging and interaction, it is questionable whether the associations also apply to this population. The aim of this study was to provide a literature review regarding the associations between forming a positive social identity and well-being in the ASD population. A systematic review was conducted, which included a total of six studies. All included studies showed that a positive ASD identity is associated with better well-being, including higher self-esteem and decreases in depression, anxiety, and stress levels. The associations that were found varied from weak to strong. The results indicate that a sense of belonging and acceptance within their disability group seems to go hand in hand with positive effects on their well-being. This finding may have important implications for future treatments, which may be tailored to promote positive social identity in the ASD population and as a result profit from the associated benefits of it.

Keywords: Social Identification; ASD; belonging; well-being; positive social identity

The Association Between Social Identity and Well-being in ASD

Introduction

Autistic Spectrum Disorder (ASD) is a neurodevelopmental disorder with a high heritability rate (Palmen et al., 2004; Rylaarsdam & Guemez-Gamboa, 2019), characterized by deficits in social communication and interaction, as well as restricted and repetitive patterns of behavior that may interfere with their daily function. (American Psychiatric Association, 2013). The prevalence of ASD is estimated to be 0.65%, with a higher prevalence found in men compared to women (3:1) (Loomes et al., 2017; Zeidan et al., 2022). Brain alterations in individuals with ASD have been found to be in a variety of areas such as the amygdala, the hippocampus, the basal ganglia, and the white and grey matter (Ha et al., 2015; Rowland, 2020; Chandran et al., 2021) which have been associated with deficits in cognitive function (Narzisi et al., 2013; Volkmar et al., 2014; Zwick, 2017; Braconnier & Siper, 2021). ASD is also associated with slower language and daily living skills (DLS) acquisition, lower IQ, lower well-being, self-esteem, and higher depression rates, (Bal et al., 2015; Brown et al., 2022; Cai et al., 2023; Mazurek, 2014; Van Der Cruijsen & Boyer 2021; Wise et al., 2020). These different deficits may also manifest behaviorally as difficulties in adjusting to new situations, impaired understanding of others' emotions, and deficits in sensory function (Duvall et al., 2022; Hazen et al., 2014; Jiang et al., 2020). The effects of these deficits may extend to difficulties in experiencing a sense of belonging as individuals with ASD experience challenges in social competence and in adapting their behaviors to others (Milton & Sims, 2016; Myles et al., 2019) which may have a negative impact on their well-being. However, it has been suggested that the consequences that the main symptoms of ASD may have on their well-being may be partially mitigated by feeling like a member of a disability group, or else by the formation of a social identity within the disability group (Nario-Redmond & Oleson, 2016).

Tajfel et al. (1971) in their landmark study investigated group identity and how it shapes intergroup behavior. The results of their study supported that individuals who identify themselves as part of a group tend to show favoritism toward other members of that group. Consequently, Tajfel et al. (1979), expanded on these findings and supported that people's individual identity is partly shaped by their group identity. Also, they noted that the groups that people belong to and the feeling of belonging to them can be a great source of pride and self-esteem. Moreover, they reported that the procedure of evaluating someone as "us" or "them" involves the processes of social categorization, social identification, and social comparison. This led to the development of the Social Identity Theory (SIT) as it was termed by Tajfel, which was the first theory that highlighted the difference in group dynamics and the alterations in intergroup behavior.

Building on SIT, Turner and his colleagues (1985), used the term Self-Categorization Theory (SCT) to introduce another theory that emphasized more on the intragroup process than the intergroup. This theory proposed three levels of self-categorization that are seen as essential for the formation of self-concept: human identity, social identity, and personal identity. Human identity categorizes individuals as human beings, while social identity categorizes individuals as members of a social group. Lastly, personal identity is based on interpersonal comparisons. The SCT has far-reaching implications for our understanding of the human psyche, self-concept, and self-functioning. One key insight is that the human mind is inherently social, and the self is adaptable, context-dependent, and subject to change. Recent SCT research supports the idea that social identity and the internalization of in-group norms and values can have a transformative impact on organizational behavior, individual health, well-being, and conduct. SIC and SCT together, provide a framework for understanding the complexities of group identity and its impact on individual behavior.

Cameron (2004), while recognizing the importance of the social identity theory and its constructs, proposed a three-factor model of social identity in an attempt to conceptualize and measure the strength of the identification with a group and also to resolve the issue of the dimensionality of social identification. The proposed model includes the terms, cognitive centrality, ingroup affect, and ingroup ties. Cognitive centrality refers to the importance of being a group member, ingroup affect refers to the positive emotions associated with the group membership, and lastly, ingroup ties emphasize the perceptions of similarity and belongingness with other group members, These terms have been used in a number of studies in order to measure the strength of group identification (Mohr & Kendra, 2011; Chan & Mak, 2021). The importance of belonging to a group and its effects have been further explored in a variety of studies.

In a study by Branscombe et al. (1999), it was supported that identifying with a disability group may buffer the harmful effects of stigma. Several studies have documented the effects of social stigma on reduced well-being, depression symptoms, and anxiety in both persons with the disability and their families (Alshaigi et al., 2020; Campbell, 2007; Han et al., 2022; Hurley-Hanson et al., 2020; Turnock et al; 2022). These negative effects further highlight the importance of social identity and belongingness which was also noted by Bogart et al. (2018), who reported similarly to previous studies that identifying with a disability group could serve as a buffer against the harmful effects of stigma, enhance self-esteem and lead to improved life satisfaction and well-being (Bogart et al., 2017; Chalk et al., 2020).

Additionally, the effects of belongingness have been studied in school and university environments. This research has shown that there can be both short and long-term implications for academic achievements, and persistence in course study as well as for the well-being, health, and emotional intelligence of the students (Akiva et al., 2013; Allen et al., 2022; Karaman & Tarim, 2018; Moeller et al., 2020).

Wilczynka et al. (2015) in their study, provided empirical support for the relationship between the sense of belonging and life satisfaction in depression symptoms. Belongingness has been linked with various outcomes, including increased resilience and coping abilities (Allen et al., 2021). The study of Begen and Turner-Cobb, (2015) noted a correlation between belongingness and self-esteem but also indicated that the sense of belongingness may also lead to lower health rates. Conversely, the sense of not belonging to a group has been found to have a series of negative effects. The negative outcomes that have been reported range from increased risk of mental illness, reduced immune function, early immortality, depression, and poor sleep quality (Cacioppo et al., 2011; Choenarom et al., 2005; Harris et al., 2022; Hawkley & Capitanio, 2015; Holt-Lunstad, 2018; Slavich et al., 2010).

The positive effects of social identity and group membership have been replicated in individuals with various types of disabilities. Read et al. (2015), supported that people who identify with a minority stigmatized group were found to have benefits in combating stigma and maintaining positive self-esteem. The effects of maintaining positive self-esteem were also found to be associated with group identification in other studies (Nario-Redmond et al., 2013; Bogart et al., 2018). Moreover, Bogart et al. (2015) in their study demonstrated that individuals diagnosed with multiple sclerosis who identified with a group reported lower levels of psychological distress. Similarly, individuals with blindness reported less psychological distress, higher quality of life, and life satisfaction when they had friends who shared the same disability. (Silverman et al., 2017).

Given the social challenges experienced by individuals with ASD such as making friends, understanding social cues, and trouble with social reciprocity (Bauminger, 2002; Chamberlain et al., 2007; Mendelson et al., 2016), and the positive associations reported between well-being and social identity in other disability groups, it is essential to investigate whether social identity has an effect on the well-being of individuals with ASD. Despite the

existence of a number of treatment programs that have been created in order to assist people with ASD (Choueiri & Zimmerman, 2017; Vismara & Rogers, 2010), only a few have focused on the effects of positive social identity on ASD. Therefore, it is highly relevant to examine whether social identity has an effect on the well-being of people with ASD. This will be done by reviewing the studies that were conducted in the last two decades with this research question. Based on other disability groups it is expected that social identity has a positive effect on well-being in people with ASD as well.

Method

Database Searches

The present study was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Page et al., 2021)guidelines. A systematic search was performed in the databases PsychInfo and Scopus to identify studies investigating the relationship between social identity and ASD. The search terms that were employed were the combination of "social identity", "identification", "identity", "belonging", "ingroup" OR "membership" and "ASD", "autism" OR "autistic". Furthermore, a number of filters were applied to specify the type of studies needed. These filters were: studies that were peer-reviewed, written in English, published in a journal, and studies that their full-text available was available.

Study Selection Procedure

Consequently, the records were imported into a reference manager and the duplicates were removed. First duplicates were removed, then from the remaining studies, the abstract and the title were inspected removing the studies that were not relevant to the topic of the review. In the last phase, the full texts of the remaining studies were thoroughly reviewed and

those that met the eligibility criteria were included in this study. The date on which the studies search was conducted was on the second of January.

Inclusion and Exclusion Criteria

The inclusion criteria that were used were as follows: the study had to be published in English from 2000 onwards in a peer-reviewed scientific journal, with a participant group in which at least 75% of participants had an official ASD diagnosis. The studies had to report quantitative results about the association between social identity and well-being (e.g., level of depression, anxiety, stress, and self-esteem). Additionally, the association between social identity and well-being should be measured in a quantitative way, thus providing statistical information like correlations. The baseline of 75% formal diagnosis was set in order to ensure that the sample size of each study was sufficient to represent the ASD population and to enhance the generalizability of the study results.

Content Analysis

The first author coded the study characteristics, including sample characteristics (i.e., number of participants, gender, age), the percentage of participants who had a clinical diagnosis of ASD formal diagnosis, the social identity measurement, measurements regarding well-being, and study results regarding the association between ASD identification and well-being. The data was extracted from the reviewed studies by the author. Each study was individually described in alphabetical order, and the correlations for the association between well-being and social identity were described. The statistical significance level adopted by the original researchers was used to determine significance.
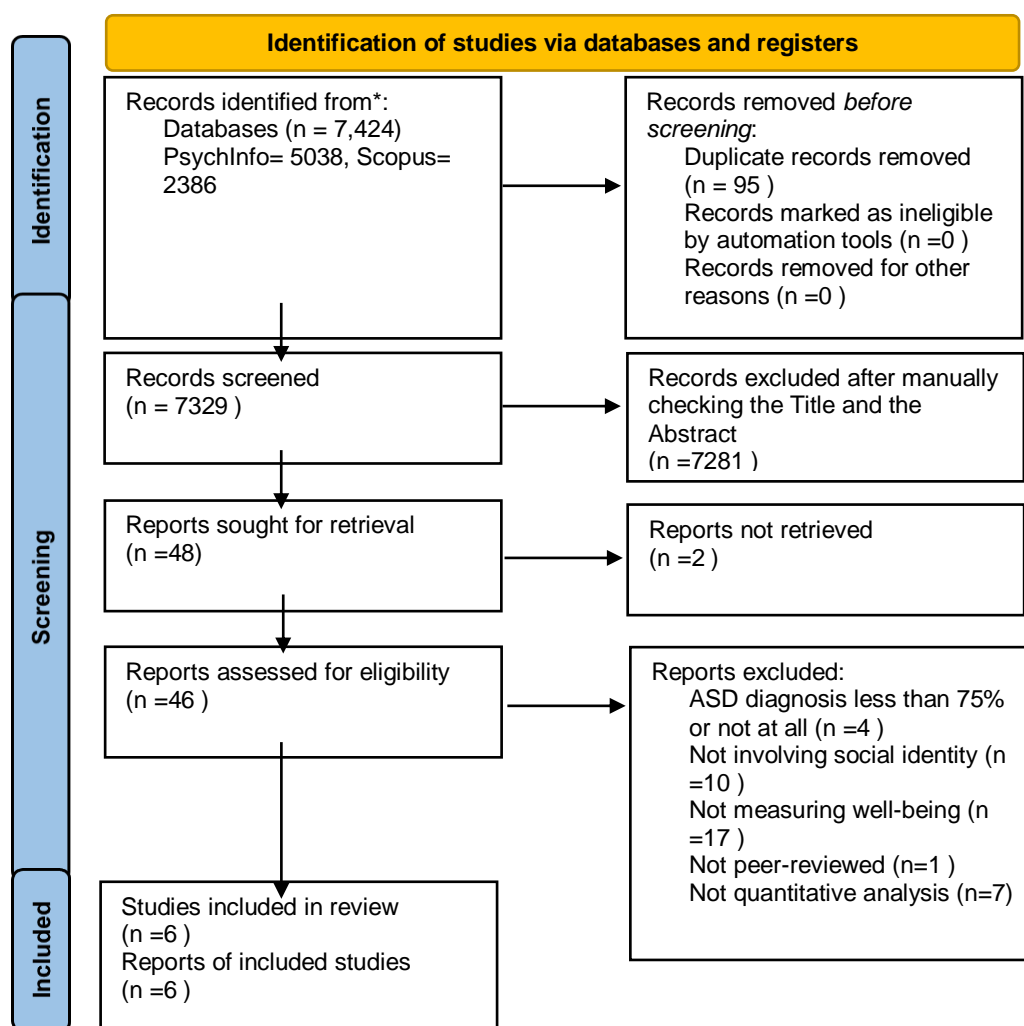
Results

Figure 1 Flowchart of studies selected for review

Figure 1 shows an overview of the search process of studies. The results of the initial

screening after using the search terms were in sum 7.424 records including both PsychInfo

and Scopus (7329 records after removing duplicates). After examining both the title and the

abstract the reports that were left were 48. From these reports, 2 were not able to be retrieved

and 39 were excluded due to inclusion and exclusion criteria. After the screening, six studies

were selected for review in this study.

Table 1

Outcomes of the Reviewed Studies

Study	N(male/female/other)	Age (in years)	Formal ASD diagnosis (%)	Social identity measurement	Well-being measurements	Results (association with social identity)
Cage, Di Monaco & Newell, 2018	111 (27, 60, 14)	18-72 (M=36.4, SD=12.0)	90	Autism acceptance questions	DASS-21 (Depression, stress, anxiety)	Depression: r= -.41, p <.001 Anxiety: r= -.12, p=.14 Stress: r= -.20, p=.029
Cooper, Cooper, Russel & Smith, 2021	140 (51, 71, 18)	16-70(M=36, SD=15)	75	14-item Multidimensional Scale of Social Identification	CSE (self-esteem)	Self-esteem: r= .52, p<.001
Cooper, Russel, Lei & Smith, 2022	121 (82, 36, 3)	15-22 (M=17.6, SD=1.10)	100	14-item Multidimensional Scale of Social Identification	SAS-A (social anxiety) WEMWBS (well-being)	Well-being: r= .42, p<.001 Social anxiety: r= -.19, p>.05
Cooper, Smith & Russel, 2017	272 (144, 128)	NS (M=32.7, SD=12.6)	81	14-item Multidimensional Scale of Social Identification	CSE (self-esteem) RSE (self-esteem) STAI (anxiety) T-DEP (depression)	Collective self-esteem: r= .43, p<.001 Personal self-esteem: r= .158, p=.01 Anxiety: r= -.037, p>.05 Depression: r= -.046, p>.05

Corden, Brewer & Cage, 2021	151 (30, 117, 4)	18-65 (M=31.6)	100	QDIO adapted subscales	RAADS-14 (autistic traits) RSE (self-esteem) WEMWBS (well-being)	Self-esteem: r=.59, p<.001 Well-being: r=.52, p<.001
Maitland, Rhodes, Hare & Stewart, 2021	184 (28, 115, 11)	18-67 (M=41.0, SD=12.8)	87	14-item Multidimensional Scale of Social Identification	SRS-2 (autistic traits) BDI-II (depression) STICSA (anxiety) SWEMWBS (well-being)	Depression: r= -.29, p<.01 Anxiety: r= -.03, p>.05 Mental health: r= .31, p<.01
N	979 (362, 527, 50)					

Note. M= Male, F=Female, O=other, NS= Not Specified. DASS-21 = Depression Anxiety and Stress Scale (Lovibond & Lovibond, 1995). RSE= Rosenberg Self-Esteem (Rosenberg, 1965). WEMWBS= Warwick-Edinburgh Mental Wellbeing Scale (Tennant et al., 2007). SRS-S= Social Responsiveness Scale – Short (SRS-S; Constantino & Gruber, 2005). SRS-2: Social Responsiveness Scale for adults (Constantino & Gruber, 2012). STAI= State-Trait Anxiety Inventory (Spielberger et al., 1983). T-DEP= Trait Depression scale (Spielberger et al., 2003). SAS-A= Social anxiety scale for adolescents (La Greca & Lopez, 1998). CSE = Collective Self-Esteem (Luhtanen and Crocker, 1992). QDIO = Questionnaire on Disability Identity and Opportunity (Darling & Heckert, 2010).

Study Characteristics

The various characteristics of the included studies in the systematic review are depicted in Table 1. All of the studies used convenience samples, with a total of 979 participants (362 males, 527 females, and 50 participants whose gender was not specified). The mean age of the participants varied between 17.6 and 41 years across the studies. The outcome measures of well-being included depression symptoms (k=3), self-esteem (k=3), anxiety (k=4), stress (k=1), and psychological well-being (k=3), all of which were assessed by self-report questionnaires.

Social identity measures

In order to measure social identification three different instruments were used across the studies. In four of the studies, an adapted version of the 14-item Multidimensional Scale of Social identification (Leach et al., 2008) was used which was tailored for individuals belonging to the autistic population (Cooper et al., 2017). The use of it has been found reliable in different social identities. This measure encompasses two dimensions, i.e., self-investment and self-definition. Self-investment measures solidarity (the level at that someone feels a connection to other autistic people), satisfaction (how positively the individual feels about their ASD identity), and centrality (the importance the individual places on their ASD identity. The second dimension, self-definition is composed of individual self-stereotyping (how similar the individual feels to other autistic people), and in-group homogeneity (whether the individuals think that autistic people are similar to one another). The items are scored on a Likert scale ranging from 1 to 7, with higher scores indicating stronger identification with the ASD social identity.

 One of the studies (Cage et al., 2018) used autism acceptance questions in order to measure social identity, which focused on identifying how individuals perceive society's (2

items), family (1 item), and friends' acceptance (1 item), and their acceptance of themselves as individuals with autism (1 item). The first question about society's acceptance was answered on an ordinal scale (yes/no/sometimes/prefer not to say) and the rest were answered on a Likert scale, on a 5-point scale ranging from "strongly agree" to "strongly disagree" related to how accepted the participants felt by the society last week, and on a scale from zero ("not at all") to ten ("completely") how accepted they feel from their family, friends, and by themselves. This type of measurement, while validated for the study it is not a type of measurement that has been validated and used in terms of measuring the level of identification with ASD identity.

In the study by Corden et al. (2021), two adapted scales from the Questionnaire on Disability Identity and Opportunity (QDIO, Darling & Heckert, 2010) were utilized. The two subscales namely autism pride and exclusion/dissatisfaction consisted of four items each and were rated by the participants using a five-point Likert scale ranging from 1 (strongly disagree to 5 (strongly agree) summing up to a score ranging from 4 to 20. A higher score in the autism pride subscale would be an indication of a stronger sense of pride associated with having an autistic identity and a higher score in the exclusion/dissatisfaction scale would indicate a greater dissatisfaction with being autistic.

Study Results

The study by Cage et al. (2018) aimed to investigate the relationship between perceived acceptance of autism and mental health. In further detail, the conductors of the study explored how external and personal acceptance of autism measured by social identity autism acceptance questions, may affect the mental state. The sample consisted of over 50% females, with the remaining portion being shared among males and other genders. The findings showed that a higher personal acceptance of ASD was significantly associated with

less depression characterized by a moderate effect size (r= -.411, p<.001). However, an insignificant correlation was found between ASD identification and anxiety (r= -.12, p= .029) and also with stress (r= -.207, p= .029). Besides personal acceptance of ASD, important to mention is that significant correlations were also found between external acceptance and the variables explored. Characteristically, external acceptance was significantly correlated with depression showing a moderate effect size (r=-.497, p<.001), and stress with a similar effect size (r=-.411, p=.001). However, anxiety while also showing a significant correlation the effect size was just close to moderate (r=-.278, p=.005),

Cooper et al. (2017), hypothesized that individuals with ASD who positively acknowledge their ASD identity as part of their social identity may have beneficial effects on their well-being and more specifically on self-esteem and symptoms of depression and anxiety which have been found to be correlated with the ASD identity. The study used the 14-item Multidimensional Scale of Social identification (Leach et al., 2008) in order to measure social identity. The findings of the study showed that feeling a strong sense of belonging (positive ASD social identity) was associated with higher self-esteem and better health outcomes such as lower levels of depression and anxiety. Autism identification correlated significantly with collective self-esteem displaying a moderate effect size (r= .43, p <.001). The correlation with personal self-esteem while significant it was not characterized by a large effect (r= .158, p =.01). Furthermore, a negative moderate correlation, was found between ASD identification and anxiety but it was not found to be significant (r= -.37, p >.05). The negative correlation between ASD identification and depression while moderate was not found to be significant (r= -.46, p >.05).

Cooper et al. (2021), aimed to explore how autistic people perceive the attributes of autism and how positively or negatively these perceptions are correlated with their identification with autism and collective self-esteem. The 14-item Multidimensional Scale of

Social identification (Leach et al., 2008) was used to measure social identification adapted by Cooper et al. (2017). After the analysis, the findings showed that individuals with ASD who had a positive perception of autism and a strong identification with their autism identity had higher levels of collective self-esteem compared to those who had a negative perception of autism and weaker identification. The effect of the correlation that was found between ASD social identification and collective self-esteem was significant with a moderate effect size ($r=.52$, $p<.001$) An additional finding was that individuals who receive a diagnosis of ASD at a younger age were most likely to have a positive sense of their autistic identity.

Cooper et al. (2022), investigated the correlation between positive feelings about one's autistic identity and feeling more solidarity with other autistic people with social anxiety and psychological well-being. As a social identification measurement, the study used the adaptation (Cooper et al., 2017) of the 14-item multidimensional scale of social identification (Leach et al., 2008). All the participants were of younger age resulting in a limited age range of 15 to 22 years old. The results of the study supported that higher self-reported autism traits were associated with higher social anxiety. Additionally, identifying positively with the social autism identity and autism solidarity were associated with higher psychological well-being and lower social anxiety. The correlation between ASD satisfaction and psychological well-being was significant with a moderate effect ($r= .42$, $p<.001$) but the correlation with social anxiety was found to be insignificant $(r= -.19$, $p>.05)$.

The study by Maitland et al. (2021), was conducted in order to examine the relationship between social identities and mental well-being in autistic adults. All of the participants were assessed with different measures in order to explore their social functioning, autism social identification, depression, anxiety, and mental health. The male gender was underrepresented by occupying approximately 15% of the total sample For the measurement of social identification, the 14-item multidimensional scale of social identification (Leach et

al., 2008) was used. The results of the research showed that socially identifying as autistic was negatively correlated with depression and anxiety and positively correlated with positive mental health. The correlation between ASD social identification and depression was found to be significant and moderate in effect ($r=-.29$, $p<.01$) as also as positive mental health which was also found to be significant and moderate ($r=.31$, $p<.01$). However, the correlation between ASD identification and anxiety was insignificant ($r=-.03$, $p >.05$).

Finally, Corden et al. (2021), examined the relationship between social identity, self-esteem, well-being, and diagnostic timing of autism. Remarkably, the male gender was underrepresented with the women population being almost four times the size of the male population. For the measurement of social identity, two subscales (i.e., ASD pride and Exclusion/Dissatisfaction) from the Questionnaire on Disability Identity and Opportunity were used. The findings of the study revealed significant strong positive correlations between ASD pride and both self-esteem ($r=.59$, $p<.001$) and well-being ($r=.52$, $p<.001$). Additionally, Exclusion/Dissatisfaction was significantly negatively correlated with both self-esteem ($r=-.78$, $p<.001$) and well-being ($r=-74$, $p<.001$), indicating that higher feelings of exclusion are associated with lower levels of well-being and self-esteem. Another noteworthy finding was that a less recent ASD diagnosis was associated with more a positive ASD identity and greater benefits from it.

To summarize, all of the reviewed studies revealed a number of significant associations between ASD social identification and positive outcomes concerning self-esteem, mental health, and overall well-being. Furthermore, the studies also indicated a reduction in depression, anxiety, and stress levels when individuals with ASD positively identified with their disability group. However, the extent of these effects ranged from low to moderate across the studies.

Discussion

The primary objective of this study was to investigate the potential influence of social identity on the well-being outcomes of individuals with ASD. Specifically, the aim of the study was to explore whether social identity correlates with better subjective well-being in individuals diagnosed with ASD, as well as with mental health outcomes among this population. Finding similar positive associations between social identity and ASD in health outcomes like they have been found in other disorders may result in the creation of new rehabilitation programs with the main goal being the promotion of social identity or the addition of this topic in already existing programs.

The present review utilized 6 studies to investigate the effects of having a positive ASD social identity. The findings revealed interesting associations between a positive ASD social identity and various psychological outcomes. Specifically, a negative correlation was observed between a positive ASD social identity and symptoms of depression, anxiety, and stress. Notably, the most consistent finding was the significant negative correlation between depression symptoms and positive social identity. A negative correlation pattern between anxiety and positive ASD was supported but this finding was not significant in all the studies. The correlation between stress and positive social identity while negative was only investigated in one study and it was not found to be significant. These associations suggest that a positive ASD social identity may contribute to a better quality of life. However, it is important to consider the possibility of bidirectional causation, such that fewer depression symptoms may facilitate the formation of a positive ASD identity. The current results are consistent with the Social Identity Theory (SIT) proposed by Tajfel and colleagues (1979), which highlights the association between group belongingness, well-being, and self-esteem. Moreover, the present findings support the Social Cognitive Theory (SCT), which proposes that the internalization of in-group norms can influence individuals' behavior and well-being.

The impact of social identification has been observed in various disability groups and may also apply to individuals with ASD. Characteristically, a meta-analysis by Postmes et al. (2019) examined 76 studies on the relationship between social identification and depression symptoms in clinically depressed individuals. The results showed that social identification had a strong mediating effect on depression symptoms for both stigmatized and non-stigmatized groups. The importance of the role of social identification in depression symptoms could be also transferred to the ASD population since depression is highly frequent in this population and stigmatization is also a common phenomenon which adds more to the depression levels. (De-la-Iglesia & Olivar, 2015; Turnock et al., 2022).

The effects of social identity on depression were also replicated in the study by Cruwys et al. (2014) in which it was supported that the individuals that had a stronger social identity, and a feeling of belonging but also a larger number of social groups resulted in higher self-esteem and fewer depression symptoms than individuals who were part of fewer groups or had a negative or no social identification. These effects seem to be also evident in the ASD population since the studies that were investigated in this review suggest that individuals with ASD who develop a strong positive identification with their disorder may experience similar positive effects on their depression symptoms and self-esteem.

Research on anxiety disorders has found positive effects on social identification and anxiety symptoms. A study with a student population diagnosed with high anxiety levels found that a strong social identification was related to less anxiety and improved well-being (Zwettler et al., 2018). Although more research is needed, since the correlation between anxiety and ASD identification has not been examined so much and the results found in the studies conducted were not significant, it is possible that a similar relationship exists between social identification and anxiety symptoms in the ASD population and it should be explored more.

Furthermore, elevated self-esteem, higher well-being, and fewer depression symptoms have been observed in eating disorders (Ison & Jent, 2010; McNamara & Parsons, 2016) and psychosis (McIntyre et al., 2018). Individuals with eating disorders seem to cope better when they have a strong feeling of belonging to the group, which is also associated with higher well-being. Social identification has also been linked to fewer symptoms of paranoia, elevated self-esteem, and fewer depressive symptoms in individuals with psychosis. Similar effects in depression, self-esteem, and well-being were also noted in individuals with ASD when they were able to identify positively with the ASD identity and create a sense of belonging in that group. Notwithstanding the reported favorable impact on mental health resulting from social identification and affiliation with disability groups across different disability categories, it is important to consider crucial aspects unique to the ASD population when generalizing these findings.

Due to the unique nature of ASD, the task of fostering a sense of belonging and social identification in individuals with ASD is uniquely challenging. A core feature of ASD is difficulty recognizing social cues, and nonverbal communication which can impede the formation and maintenance of social connections (Rozga et al., 2011). In addition, individuals belonging to the ASD population may face challenges in expressing their emotions and thoughts (Nuske et al., 2013), hindering their ability to identify with others who share similar experiences and ultimately, making it more difficult to establish a sense of belonging.

Compounding this difficulty is the high variability in the presentation and severity of ASD symptoms (Wozniak et al., 2017), which can result in extremely different experiences among individuals belonging to the ASD population, further complicating the process of identification and social connection. Individuals with ASD may feel misunderstood, may find it difficult to identify others that share the same experiences, and as a result, make it more difficult for them to form and maintain meaningful relationships and develop a sense of

belonging. Despite the number of correlations that were reported between well-being and positive social identification in the ASD population, a number of limitations should be mentioned regarding this review and the studies included.

Limitations

There are some limitations regarding this review and the included studies. It is important to note that correlation does not necessarily imply causation. While the results suggest an association between social identity and lower levels of depression, stress, and anxiety, but also in elevated self-esteem and psychological well-being this association may also be going the other way around. People with better well-being may identify easier with the disorder. Moreover, as mentioned before all of the studies used a convenience sample which can make generalization difficult. Additionally, a number of measures that were used have not been validated in the ASD population thus their results may be challenged (Cooper et al., 2022; Cooper et al., 2017; Corden et al., 2017).

Furthermore, since it seems that there are not a lot of studies that were conducted in order to investigate the association between the mental state of people with ASD and forming a positive social ASD identity some variables that were not taken into consideration could mediate the effects. More specifically, only one of the studies examined comorbidity. In the literature, support has been found for the additive effects that additional disorders and symptoms of them may have on individuals diagnosed with ASD regarding their behavior and daily function (Belardinelli & Raza, 2016). Co-occurring medical conditions in people with ASD have also been connected with a higher risk of depression and reduced level of social being (Casanova et al., 2020).

Another variable that has been found to have different effects on people and was not taken under consideration in the studies that were used in this review is the number of social

identities. Characteristically, it has been supported that strongly identifying with multiple social identities may lead to greater psychological well-being compared to fewer social identities (Brook et al., 2008; Kulich et al., 2017). Since the number of social identities that participants identified with were not examined as a variable except the ASD social identity, the effects of the number of social identities may have altered the effects found.

Besides the limitations that the other studies may have, this review was also conducted with some limitations. In more concrete terms, the exploration that was conducted was done only among studies that have been published in scientific journals. This may have resulted in publication bias, meaning that studies that did not find significant results were not published and thus not included in this review. Furthermore, one of the filters that were used was the inclusion of studies that were written in English. Again, this might lead to the exclusion of studies that could add more support or not to this review's research questions. Since the conductor of the study was one the collection and the analysis of the studies could have been affected by assumptions and biases that the researcher may have and as a result, misinterpreting the importance of the effects that have been reported. The reliability of the review could be enhanced by adding a second independent researcher in conducting and coding the research. The limitations mentioned could be used as a guide for further research in order to examine further the effects that were reported.

Implications and Future Research

The limitations that were mentioned regarding the studies that were used in this review could be attributed to the fairly recent investigation of the association between forming a positive ASD social identity and well-being. However, it can be supported that a pattern is visible in which a strong feeling of belonging to the group of ASD, and the perception of this social identity as positive may have strong effects in producing fewer

depression symptoms, decreased anxiety and stress levels, and elevated self-esteem. These findings suggest that reducing the stigma surrounding ASD may counter the negative effects that ASD stigma has been supported to have (Barlati et al., 2022) but also create more inclusive communities that celebrate and value ASD identification.

Promoting a positive identity of ASD can as a result lead to improved overall mental health and a higher perceived quality of life for the individuals holding this diagnosis. These effects could be further generalized and enhanced if healthcare professionals and educators worked collaboratively with individuals with ASD in order to use this knowledge and develop interventions and formats that support the creation of a positive social ASD identity by promoting a sense of belonging.

Nonetheless, in order to further support the correlations that have been found regarding the effects of association between a positive ASD social identity and well-being, a number of other variables that could mediate this correlation could be investigated. Some more variables that could be introduced and have been found to affect well-being are the living conditions of each participant (Gu & Ming, 2021; Rolfe et al., 2020), the comorbid disorders (Noel, 2004; Wersebe et al., 2018), and the number of social identities (Haslam et al., 2008) each participant has could add more support to the effects that have already been found and maybe integrate the forming of positive ASD social identity in upcoming treatments in order to take advantage of the effects that have been found.

One other finding that seems to have interesting implications in forming a positive ASD identity is the age of the diagnosis. More specifically, it was observed that individuals that were diagnosed earlier in their life with ASD, were more likely to have a positive ASD social identity compared to others, that were diagnosed later in their lives. The positive effects of early diagnosis of ASD have been pin-pointed in a number of studies in which it has been found that children with an early diagnosis developed their social skills more and had a higher

level of well-being (Gabbay-Didzar et al., 2022; Elder et al., 2017). Further examining this finding, and finding support for it could give rise to more frequent assessments, especially for children at an early age. This could result in giving them more time to connect with this identity and deepen their knowledge of their behaviors and how these may be associated with this new identity.

Conclusion

Taking all things into consideration, the results of the studies that were reviewed support the idea that promoting the feeling of belonging in the ASD group and formatting a strong positive ASD social identity may result in a number of positive effects on the mental being of the diagnosed individuals. Moreover, integrating the forming of positive ASD social identity in the different treatments that exist for individuals with ASD could not only tackle the negative effects of the stigmatization but on the other hand, produce a variety of positive effects on their well-being and provide them with a higher level of life quality.

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