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**Articles**

# Perception of Well-Being, Predisposition to Optimism, and Quality of Life of Parents of Children with Autism Spectrum Disorder

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## Abstract

*Background:* The purpose of this study is to offer a scientific contribution on the possible role of some individual variables (predisposition to optimism, self-esteem, well-being, and perceived hopelessness) on the quality of life (QoL) perception of parents of children with autism spectrum disorder (ASD), given the lack of studies that investigate these variables in the Italian context. It was assumed that parents of children with ASD have lower levels of predisposition to optimism, self-esteem, perceived well-being, and QoL and higher levels of hopelessness perception compared to the parents of children with typical development. Furthermore, it was assumed that the QoL perception of parents of children with ASD is positively predicted by their predisposition to optimism, self-esteem, and perceived well-being and negatively by hopelessness.

*Method:* The sample was composed of 172 parents: 84 parents of children with ASD and 88 parents of typically developing children. For the evaluation of the variables considered, the following instruments were used: Life Orientation Test-revised (LOT-r, Scheier e Carver, 1985; Giannini et al., 2008), PERMA-Profiler (Giangrasso, 2018), Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965; Prezza, Trombaccia e Armento, 1997), Hopelessness Depression Symptom Questionnaire (HDSQ - Metalsky e Joiner, 1991), and the Quality of Life in Autism Questionnaire (QoLA – Eapen, 2014).

*Results:* The results confirmed the hypotheses; in particular, the regression analysis identified optimism together with the PERMA dimensions of realization and happiness as the positive predictors and hopelessness as the negative predictor of QoL.

*Conclusion:* This study emphasizes the need to deepen the research and, consequently, to structure adequate interventions relative to the individual factors that could play a protective role on the QoL of parents of children with ASD.

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## 1. Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by impaired social interactions together with verbal and nonverbal communication and ritualistic and stereotyped behaviors (American Psychiatric Association, 2014).

A meta-analysis conducted by Wang et al., (2017) estimates the global prevalence of this disorder at 0.62% of the population. Considering this data, which reflects the disorder's worldwide burden, this study has been focused on the impact that ASD has on the family system and, in particular, on the psychological well-being and QoL of parents with children affected by ASD.

As is known, the symptoms of the condition occur in the first years of a child's life; consequently, parents face several difficulties related to the disease, which inevitably affect the QoL of each family member (Aktan et al., 2020; Filippello et al., 2015).

The literature has examined the adaptation process of parents of children with ASD, with particular emphasis on their ability to cope with stress and then to develop psychopathologies (Staunton et al., 2020; Vahedparast et al., 2021), that negatively affect their general well-being and health-related quality of life (HRQoL) (Bohadana et al., 2019). According to the World Health Organization, the concept of "health" should not only refer to the physical state or the absence of disease and infirmity but also to a complete physical, mental, and social well-being.

HRQoL is defined as the set of levels of psychological, physical, and social functioning, including perceptions of health, physical shape, satisfaction, and well-being, as well as inter-individual relationships and other factors such as financial income and one's living environment. The complexity of this construct is evident, since it refers to a subjective assessment of all the facets of life that are affected by changes in an individual's own health, and which are indispensable for that individual (Bowling, 2002). Therefore, it is fundamental to also conceive of health as one's adaptability and ability to self-manage in the face of social, physical, and emotional challenges (Huber et al., 2011).

Thus, when analyzing the QoL of parents of children with ASD, it is essential to consider this variable in relation to the concept of health as defined by the WHO because these are two strictly interconnected aspects of an individual's functioning, whose impairment can negatively affect not only the parent but also the child, thus worsening the child's condition (Bekhet et al., 2012; Dey et al., 2019; Lange et al., 2005).

Over the past decade, the literature has dealt with correlating the QoL of parents of children with ASD with variables such as the level of severity of the disease (Kuhlthau et al., 2014), the unique characteristics of the children (Gardiner & Iarocci, 2012; McStay et al., 2014; Roberts et

al., 2017), the degree of parents involvement in their daily care, which often causes them to lose family relationships (Hoopen et al., 2020; Sylvia & D'Mello, 2021), and the family burden (Çolak, & Kahriman, 2021). Other research works investigated the perception of QoL in terms of happiness/unhappiness (Gardiner & Iarocci, 2012), analyzing the role played by contextual factors, such as health care and social support, on these emotional states (Hoopen et al., 2020). Although these studies have investigated important variables involved in the family functioning of people with ASD, equally relevant factors in the perception of QoL, such as some individual dispositions, appear to be neglected in the literature.

Various studies show, for example, that an individual's functioning is positively influenced by dispositional optimism (Carver et al., 2010), defined as an overall expectation that desirable events are more likely to occur than undesirable ones (Scheier & Carver, 1985). Consequently, optimists are confident that they can cope with events, as they believe the results of their actions largely depend on the ability to devise an action plan and carry it out with perseverance, associating the cause of their successes/failures to internal and unstable factors such as engagement (Scheier & Carver, 1985; Segerstrom et al., 2017). Optimism is assumed to be a stable personality trait with little chance of change (Peterson, 2000). Schneider (2001) defines the optimism construct as "realistic," a positive disposition that includes information and data from the physical and social worlds to maintain a realistic and concrete view of reality.

In general, the literature proves that optimism is positively correlated to good memory skills (Abele & Gendolla, 2007), functional coping, and problem-solving styles and also to better performances in the workplace and in sports (Seligman, 1991). Optimistic individuals attend to their physical health by increasing healthy behaviors; they also put effort into establishing social relationships, benefiting from this in terms of the social support received (Abele & Gendolla, 2007), Optimists exhibit favorable expectations for their future across all life contexts (Carver et al., 2010), paying more attention to favorable stimuli from the environment compared to unfavorable ones, evaluating the desired results as achievable, and persevering in their attempts to achieve them (Nes & Segerstrom, 2006). This allows optimists to experience high levels of self-esteem and well-being (Carr, 2004).

According to these studies, Seligman (2011) considers well-being as a construct characterized by the full realization of an individual's potential and the individual's optimal functioning (flourishing), which is defined by the interdependence of five factors collectively known as PERMA: (1) Positive Emotion (P), the possibility to experience positive emotions and to focus on them rather than on negative events in order to face life with greater optimism and positivity; (2) Engagement (E), engaging in interesting activities that foster the development of new

emotional skills and competences; (3) Relationships (R), since the increase in positive relationships with relatives, peers, and colleagues is a protective factor in life's stressful moments that increases well-being due to social integration and support from others; (4) Meaning (M), as the attribution of meaning to one's own existence, whether it springs from a religious faith, the values of a community, or having a mission to carry out, has a positive effect on personal well-being; and (5) Accomplishments (A), setting realistic goals and trying to achieve them, as achievement involves the development of skills and masterhood in various areas such as work, sports, or hobbies. Seligman (2011) states that daily cultivation of these five factors would increase mental and physical well-being and hinder feelings of helplessness and hopelessness.

According to the hopelessness theory of depression (Abramson et al., 1989), when a subject, in any context (school, work, family, etc.), is in an uncontrollable condition characterized by adverse environmental stimuli, they can develop a helpless behavior due to the belief that they are unable to deal with the situation (Filippello et al., 2020b; Sorrenti et al., 2019). Simultaneously, the individual would be aware that attempts to change events are useless; consequently, a vicious circle would arise between cognition and behavior that could lead the person to a condition of "despair" or hopelessness (Buzzai et al., 2020; Liu et al., 2015; Longo et al., 2019). If, on the other hand, an individual is aware that they can modify events, attributing the cause to internal and unstable factors such as engagement, they may be more likely to be predisposed to dispositional optimism, with positive spillover effects on self-esteem (Filippello et al., 2020b; Scheier & Carver, 1985; Segerstrom et al., 2017). Conversely, people with a pessimistic explanatory style, who attribute negative events to internal, stable, and global causes, are more likely to feel negative emotional states that can lead to the development of hopelessness (Abramson et al., 1989; Liu et al., 2015); this is especially true if they find themselves in a very stressful condition, such as the one that afflicts individuals who must face daily problems due to the presence of more or less disabling pathologies (Catalano et al., 2019; Martino et al., 2020a, 2020b; Sorrenti & Filippello, 2021; Vita et al., 2020) and who, consequently, can compromise their psychophysical well-being to a greater extent than those who do not experience events that can negatively affect their QoL.

### 1.1 The Present Study

On the basis of the studies described, this study aims to offer a scientific contribution on the possible role that some individual variables (predisposition to optimism, self-esteem, well-being, and hopelessness) could play on the QoL perception of parents of children affected by ASD, especially because of the relevance that individual factors play in HRQoL (Bohadana et al., 2019) and due to the lack of studies that investigate these variables in the Italian context.

In particular, it is assumed that parents of children with ASD have lower levels of predisposition to optimism, self-esteem, well-being, and QoL and higher levels of hopelessness perception compared to parents of children with typical development. Moreover, it is assumed that the predisposition to optimism, self-esteem, and the perception of well-being are positive predictors for the QoL perception of parents of children with ASD, unlike hopelessness, which is a negative predictor.

## 2. Method

### 2.2 Participants

The research involved 172 parents, 84 parents of children with ASD (47 mothers and 37 fathers) and 88 parents of typically developing children (47 mothers and 41 fathers), with an average age of 39.56 years old (SD = 7.4). The age of the children was between 3 and 10 years old (M = 6.13; DS = .15). The parents of children with ASD were recruited from five rehabilitation facilities in the cities of Messina and Reggio Calabria (Italy), while the parents of children with typical development were recruited from two schools in Messina. All the participants were Italian and spoke Italian. Regarding the parents' socioeconomic status (SES), 48.6% belonged to an average SES (one parent had a high school diploma), 36.4% belonged to a low SES (one parent had a secondary school diploma), and 17% belonged to a high SES (one parent had a master's degree). Familial SES was determined based on the parents' educational qualifications, combining maternal and paternal educational qualifications in a single SES category (see Sirin, 2005).

### 2.2 Measures

The Italian version of the *Life Orientation Test-revised* by Giannini et al., (2008) (LOT-r, Scheier & Carver, 1985) was used to evaluate dispositional optimism**.** The instrument is composed of 10 items (e.g., "Overall, I expect more good things to happen to me than bad," "In uncertain times, I usually expect the best," "I'm always optimistic about my future"). Participants responded on a 5-point Likert-type scale, ranging from 0 (Strongly disagree) to 4 (Strongly agree). The LOT-r demonstrated acceptable reliability and construct validity in previous studies (Buzzai et al., 2020; Di Fabio & Bucci, 2015; Giannini et al., 2008).

The Italian version of the *PERMA-Profiler* (Giangrasso, 2018) was used to assess general well-being. The questionnaire consists of 23 items, 15 of them measuring: positive emotion, engagement, relationships, meaning, and accomplishment along with three independent factors (health, negative emotions, and loneliness), plus a single item that measures happiness. For the present study, 16 items were used (e.g. "How much of the time do you feel you are making

progress towards accomplishing your goals?") that related to the five pillars to measure overall well-being score and the overall happiness item. All items were rated on an 11-point Likert-type scale, with 0 indicating extremely low levels and 10 indicating extremely high levels. Overall well-being score was calculated as the average of 16 items. The PERMA-Profiler demonstrated acceptable reliability and construct validity in previous studies (Butler & Kern, 2016; Buzzai et al., 2020; Giangrasso, 2018).

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was used to evaluate self-esteem. In this study, we used the Italian version of Prezza, Trombaccia and Armento (1997) which includes 10 items (e.g., "I think I have a good number of qualities," "Overall I am satisfied with myself"). Participants respond on a Likert scale from 0 to 4 points, which varies from "strongly disagree" (0) to "strongly agree" (4). The questionnaire demonstrated robust psychometric properties in previous studies (Filippello et al., 2019; Prezza et al., 1997; Rosenberg, 1965; Wang, 2010).

The Hopelessness Depression Symptom Questionnaire (HDSQ - Metalsky & Joiner, 1991) was used to evaluate hopelessness. The tool consists of 32 items (e.g., "I have given up trying to achieve the goals that matter to me," "I am distracted by unpleasant thoughts," "I am a burden to others") to which participants respond on a 4-point Likert scale (0 = extremely low levels to 3 = extremely high levels). The Italian version of the HDSQ was developed using the back-translation method and, in this study, Cronbach's Alpha is .92.

To evaluate the parents' QoL, the Quality of Life in Autism Questionnaire (QoLA - Eapen, 2014), a specific measure for parents and caregivers of children with ASD, suitable for clinical and research contexts, was used. The instrument consists of 48 items divided into two subscales: the first specifically assesses QoL (e.g., "I am satisfied with my life," "I am satisfied with my health"), while the second is an index of the level of issues resulting from their child's ASD symptoms (e.g., "Managing their emotional responses," "Socializing with people"). Participants respond on a 5-point Likert scale ranging from "not at all" (0) to "very" (5). Eapen reports excellent psychometric properties. The Italian version of the instrument was developed using the back-translation method and, in this study, Cronbach's Alpha is .94.

### 2.3 Procedure

All parents were informed about the study purposes, and they spontaneously accepted to join the research and did not receive any compensation for participating in the survey. Participants filled out the research protocol approved by the Ethics Committee of the Research and Intervention Center (CERIP) of the University of Messina.

The questionnaires were administered in anonymous format at the rehabilitation facilities and schools. To avoid effects due to the order in which the questionnaires were presented, they were administered to half the sample in the reverse order. Completing the protocol took approximately 45 minutes.

### 2.4 Data Analyses

Descriptive analyses, differences between groups (ANOVA and MANOVA), correlations, and linear regression were performed using the IBM SPSS 19.0 (2010) statistical software.

Using the univariate (ANOVA) and multivariate (MANOVA) analyses of variance, with the estimate of the effects size by the Bonferroni correction, the effects due to the group (parents of children with ASD vs. parents of typically developing children) on the variables considered were studied.

To investigate the relationship between predisposition to optimism, self-esteem, well-being, hopelessness, and perceived QoL, the bivariate correlations (Pearson's r) were calculated for the group of parents of children with ASD. Finally, a linear regression analysis was conducted to investigate whether a predisposition to optimism, self-esteem, well-being, and perceived hopelessness could play a predictive role on the QoL perception of parents of children with ASD.

## 3. Results

Table 1 shows the means, standard deviations, skewness, and kurtosis for all variables considered in this study.

**Table 1.** Means, standard deviations, skewness, and kurtosis. N=172

| | *M* | *SD* | *Skew* | *Kurt* |
|---|---|---|---|---|
| **Optimism** | 2.45 | .78 | .03 | -.20 |
| **Positive emotions** | 7.50 | 2.08 | -.70 | -.20 |
| **Engagement** | 6.96 | 1.75 | -.12 | -.91 |
| **Relationships** | 7.70 | 1.96 | -.88 | .64 |
| **Meaning** | 7.90 | 1.99 | -1.13 | 1.3 |
| **Accomplishments** | 7.65 | 1.70 | -.50 | -.43 |
| **Negative emotions** | 3.80 | 2.42 | .19 | -.60 |
| **Health** | 7.37 | 2.27 | -.76 | -.28 |
| **Happiness** | 7.61 | 2.33 | -1.11 | 1.17 |
| **Loneliness** | 3.01 | 3.25 | .66 | -.86 |
| **Self-esteem** | 3.24 | .53 | -.81 | 2.75 |
| **Hopelessness** | 1.49 | .35 | 1.05 | 1.18 |
| **QoL** | 105.40 | 17.90 | -.22 | -.56 |

### 3.1 Differences between groups

Regarding optimism, self-esteem, hopelessness, QoL, and dimensions of well-being, the effects due to the group (parents of children with ASD vs. parents of typically developing children) were studied by analyzing the univariate (ANOVA) and multivariate (MANOVA) variance.

The ANOVA highlighted a significant main effect of the group factor in relation to optimism [$F (1; 170) = 6.82$; $p < .01$; $n^2p = .039$] and QoL [$F (1; 170) = 33.89$; $p < .001$; $n^2p = .166$] at the univariate level; in particular, parents of typically developing children showed higher scores (optimism: $M = 2.60$; $SD = .75$; QoL: $M = 111.47$; $SD = 17.80$) than parents of children with ASD (optimism: $M = 2.29$; $DS = .78$; QoL: $M = 96.93$; $DS = 14.72$). Also, with regard to hopelessness, the ANOVA highlighted a significant main effect of the group factor at the univariate level [$F (1; 170) = 18.92$; $p < .001$; $n^2p = .100$]; in this case, parents of children with ASD achieved higher scores ($M = 1.61$; $SD = .37$) than parents of typically developing children ($M = 1.39$; $SD = .30$). Instead, as for self-esteem, the ANOVA did not show a significant main effect of the group factor at the univariate level [$F (1; 170) = .83$; $p > .05$; $n^2p = .005$].

From the answers that the participants provided regarding the PERMA dimensions, the MANOVA found a significant main effect of the group factor at the multivariate level [Lambda = .662; $F (9; 161) = 9.123$; $p = .001$; $n^2p = .338$]. The same effect was also shown at the univariate level in all dimensions of well-being. Specifically, the analysis of the data shows that in the positive emotions dimensions [$F (1; 169) = 36.80$; $p < .001$; $n^2p = .041$], engagement [$F (1; 169) = 42.55$; $p < .001$; $n^2p = .201$], relationships [$F (1; 169) = 16.06$; $p < .001$; $n^2p = .087$], meaning [$F (1; 169) = 14.21$; $p < .001$; $n^2p = .078$], accomplishment [$F (1; 169) = 25.44$; $p < .001$; $n^2p = .131$], health [$F (1; 169) = 34.19$; $p < .001$; $n^2p = .168$], and happiness [$F (1; 169) = 45.68$; $p < .001$; $n^2p = .213$], parents of typically developing children report higher scores (positive emotions: $M = 8.37$; $SD = 1.74$; engagement: $M = 7.73$; $SD = 1.51$; relationships: $M = 8.22$; $SD = 1.75$; meaning: $M = 8.43$; $SD = 1.93$; accomplishment: $M = 8.25$; $SD = 1.48$; health: $M = 8.27$; $SD = 1.80$; happiness: $M = 8.65$; $SD = 1.80$) compared to parents of children with ASD (positive emotions: $M = 6.61$; $SD = 2.04$; engagement: $M = 6.14$; $SD = 1.67$; relationships: $M = 7.07$; $SD = 2.01$; meaning: $M = 7.32$; $SD = 1.92$; accomplishment: $M = 7.05$; $SD = 1.64$; health: $M = 6.41$; $SD = 2.34$; happiness: $M = 6.51$; $SD = 2.32$). While, in the negative emotions dimensions [$F (1; 169) = 8.21$; $p < .01$; $n^2p = .046$] and loneliness [$F (1; 169) = 11.50$; $p < .001$; $n^2p = .064$], parents of children with ASD report higher scores (negative emotions: $M = 4.32$; $SD = 2.17$; loneliness: $M = 3.84$; $SD = 3.28$) than parents of typically developing children (negative emotions: $M = 3.28$; $SD = 2.53$; loneliness: $M = 2.20$; $SD = 3.04$).

### 3.2 Correlational analysis

Table 2 shows the correlations between variables considered.

**Table 2.** Correlations between variables. N=84

| | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *8* | *9* | *10* | *11* | *12* | *13* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1 Optimism** | 1 | | | | | | | | | | | | |
| **2 Positive emotions** | .48** | 1 | | | | | | | | | | | |
| **3 Engagement** | .30** | .53** | 1 | | | | | | | | | | |
| **4 Relationships** | .19 | .64** | .43** | 1 | | | | | | | | | |
| **5 Meaning** | .33** | .75** | .56** | .72** | 1 | | | | | | | | |
| **6Accomplishments** | .34** | .72** | .56** | .52** | .81** | 1 | | | | | | | |
| **7 Negative emotions** | -.56** | -.59** | -.23* | -.32** | -.30** | -.35** | 1 | | | | | | |
| **8 Health** | .22* | .57** | .35** | .42** | .59** | .55** | -.31** | 1 | | | | | |
| **9 Happiness** | .34** | .77* | .52** | .64** | .56** | .52** | -.45** | .35** | 1 | | | | |
| **10 Loneliness** | -.28** | -.40** | -.06 | -.39** | -.24* | -.16 | .53** | -.16 | -.31** | 1 | | | |
| **11 Self-esteem** | .48** | .59** | .39** | .38** | .66** | .70** | -.34** | .45** | .41** | -.17 | 1 | | |
| **12 Hopelessness** | -.47** | -.57** | -.37** | -.36** | -.49** | -.50** | .51** | -.53** | -.46** | .31** | -.58** | 1 | |
| **13 QoL** | .53** | .59** | .46** | .57** | .62** | .63** | -.50** | ,42** | .60** | -.39** | .54** | -.62** | 1 |

**p<.05, **p<.001*

The correlational analysis showed that QoL is positively correlated with the PERMA dimensions of positive emotions (r =. 59; p <.001), engagement (r = .46; p <.001), relationships (r = .57; p <. .001), meaning (r = .62; p <.001), accomplishment (r = .63; p <.001), health (r = .42; p <.001), and happiness (r = .60; p <.001), while it is negatively correlated with the dimensions of negative emotions (r = -. 50; p <.001) and loneliness (r = -. 39; p <.01). Furthermore, QoL is positively correlated with optimism (r = .53; p <.01) and self-esteem (r = .54; p <.001), while it is negatively correlated with hopelessness (r = -. 62); p <.001).

Optimism is positively correlated with the PERMA dimensions of positive emotions (r =. 48; p <.001), engagement (r = .30; p <.001), meaning (r = .33; p <.001), accomplishments (r = .34; p <.001), health (r = .22; p <.05), and happiness (r = .34; p <.001) and negatively with the dimensions of negative emotions (r = -. 56; p <.001) and loneliness (r = -. 28; p <.001). Furthermore, it is positively correlated with self-esteem (r = .48; p <.001) and negatively with hopelessness (r = -. 47; p <.001).

Self-esteem is positively correlated with the PERMA dimensions of positive emotions (r = .59; p <.001), engagement (r = .39; p <.001), relationships (r = .38; p <.001), meaning (r = .66; p <.001), accomplishments (r = .70; p <.001), health (r = .45; p <.05), and happiness (r = .41; p <.001) and negatively with the dimensions of negative emotions (r = -. 34; p <.001) and hopelessness (r = -. 58; p <.001).

Finally, hopelessness is negatively correlated with the PERMA dimensions of positive emotions (r = -. 57; p <.001), engagement (r = -. 37; p <.001), relationships (r = -. 36; p <. 001), meaning (r = -. 49; p <.001), accomplishment (r = -. 50; p <.001), health (r = -. 53; p <.05), and happiness (r = - .46; p <.001) and positively with the negative emotions dimension (r = .51; p <.001).

### 3.3 Regression analysis

A linear regression analysis was conducted in which optimism, self-esteem, well-being, and hopelessness represented the independent variables versus the QoL of parents with children with ASD, which represented the dependent variable.

Significant effects emerged from the analysis [F (12.82) = 13.40; p> .001]. In detail, QoL is positively predicted by optimism [t (83) = 3.01, p <.01, β = .28] and the PERMA dimensions of accomplishments [t (83) = 2.92, p <.01, β = .39] and happiness [t (83) = 2.65, p <.01, β = .32], while it is negatively predicted by hopelessness [t (83) = - 2.60, p <.05, β = -.25].

## 4. Discussion

The purpose of this study was to investigate any differences between parents of children with ASD and parents of children with typical development in relation to some individual variables such as dispositional optimism, self-esteem, well-being, hopelessness, and QoL. Furthermore, we wanted to investigate the role of individual factors on the QoL of parents of children with ASD, hypothesizing a protective function of variables such as the predisposition to optimism, self-esteem, and perceived well-being and, on the contrary, a negative function by variables such as hopelessness.

Consistent with the hypotheses, significant differences emerged between the groups. In particular, parents of children with ASD showed lower levels of dispositional optimism and QoL and higher levels of hopelessness compared to parents of typically developing children. In addition, parents of children with ASD scored lower in the "positive valence" PERMA dimensions (i.e., positive emotions, engagement, relationships, meaning, accomplishments, health, and happiness) and scored higher in the negative emotion and loneliness dimensions.

These results agree with the literature, which showed how parents with a child affected by ASD find themselves facing daily difficulties related to the child's disorder that inevitably affect the QoL of each individual family member and, consequently, their physical and psychic health (Bohadana et al., 2019). Those who find themselves in a very stressful life condition often tend to develop a pessimistic explanatory style with a greater risk of experiencing negative emotional states that can lead to the development of hopelessness (Abramson et al., 1989; Liu et al., 2015) and, consequently, negative repercussions on psychological well-being (Seligman, 2011).

In relation to the research hypotheses, since the parents of children with ASD reported lower scores in QoL than the parents of typically developing children, we wanted to deepen the links between the variables examined and the QoL of the parents of children with ASD to identify predictive factors and to prepare targeted interventions.

The correlational analysis highlighted a positive link between QoL and the "positive value" PERMA dimensions (positive emotions, commitment, relationships, meaning, accomplishments, health, and happiness) and a negative relationship with the negative emotions and loneliness dimensions.

These results agree with the definition of HRQoL (Bohadana et al., 2019), a multidimensional construct characterized by an individual's set of levels of psychological, physical, and social functioning. Furthermore, this definition refers to a subjective evaluation of all aspects of life that are indispensable for the ability to adapt and cope with social, physical, and emotional challenges (Huber et al., 2011). In this regard, it is interesting that QoL positively correlates with optimism and self-esteem and negatively correlates with hopelessness. In fact, the literature has shown that the predisposition to optimism positively affects various aspects (cognitive, emotional–motivational, and relational) of individual functioning (Abele & Gendolla, 2007; Carr, 2004; Carver & Scheier, 2014; Carver et al., 2010; Seligman, 1991), with positive effects on self-esteem and psychophysical well-being. Conversely, less optimistic individuals focus their attention on negative information, showing passivity, denial, and avoidance, with the risk of developing depression which, of course, damages health and QoL (Abramson et al., 1989; Liu et al., 2015). In accordance with these data, our study showed that the predisposition to optimism negatively correlates with hopelessness and positively correlates with self-esteem and the "positive value" dimensions of PERMA. In this regard, it should be noted that these latter dimensions also positively correlate with self-esteem and negatively correlate with hopelessness. In fact, according to Seligman (2011), well-being depends on the complete realization of the individual's potential and on that individual's optimal functioning (flourishing).

The latter can be verified if the individual will have the opportunity to: experience and focus on positive emotions, facing their life with optimism and positivity; engage in interesting activities that stimulate the development of new emotional skills and competences; enjoy positive relationships, feeling socially integrated and supported by others; attribute a meaning to their own existence; and set realistic goals and try to achieve them. If the individual pursues these factors daily, they will be able to increase their mental and physical well-being, hindering feelings of helplessness and despair.

Despite that the correlational analysis showed that all the examined individual variables are positively or negatively connected with QoL, the regression analysis identifies optimism together with the PERMA dimensions of realization and happiness as the positive predictors and hopelessness as the negative predictor of QoL.

## 5. Limitations and Directions for Future Research

This study has some limitations that could direct future research. First, the "cross-sectional" design does not allow to evaluate the direction of randomness among the variables considered. For this reason, in future research it would be necessary to make longitudinal plans to confirm and extend the results of this study. Second, the variables examined were measured through self-report questionnaires. Future research should aim to overcome this limit by trying to use direct measurements of well-being or multi-observer assessments to provide greater validity to the results. Finally, since it is a clinical sample, the large number of participants does not allow to generalize the obtained results.

Overall, these results contribute to provide scientific input on the eventual role that individual and dispositional variables could play on the QoL of parents of children with ASD, given the importance of individual factors in HRQoL and considering the lack of studies that investigate these variables in the Italian setting.

The results confirm the multidimensionality of the QoL construct, which consists of various and diverse aspects able to influence every individual's attitude to cope with adversities during their life course.

Factors such as the predisposition to optimism, the perception of psychophysical well-being, and the sense of despair appear to play an important role in the QoL perception of individuals who, like the parents of children with ASD, find themselves facing difficulties linked to the daily managing of a child with disabilities. Thus, it seems appropriate to deepen the research on individual factors that could play a protective role in coping with particularly stressful situations.

This will aid in structuring adequate interventions aimed at helping the families of children with ASD face the management of their children in the best possible way and in preventing the development of psychological problems that could lead to the development of serious psychopathologies, such as depression.

## Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any potential conflict of interest.

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