What Personal, Social, and Contextual Factors Promote Happiness among Children and Adolescents with Autism Spectrum Disorder? A Review with Implications for Researchers and Practitioners

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Abstract
Achieving happiness is essential to boost social emotional development among children and youth with autism spectrum disorders (ASD). However, there have been limited reviews on a wide range of intrinsic and extrinsic factors that facilitate well-being outcomes among individuals with ASD. This review article provides a summary on dispositional, social, and contextual factors that promote well-being among children and adolescents with autism. Personal factors that have been found to influence happiness among individuals with autism include personality, self-esteem, and emotion regulation. Social factors such as parents, peers or friends, and teachers also contribute to well-being among youth with ASD. Importantly, the role of contextual and broader ecological factors such as inclusive educational policies has been elaborated.

Keywords: Autism spectrum disorder, children, youth, well-being

In general, happiness or subjective well-being encompasses an individual’s negative emotions, positive emotions, and life satisfaction (Diener, 1984; Diener, 2009; Diener et al., 2003). There is enormous body of evidence on the psychological and social predictors of happiness in typically developing children (Baiocco et al., 2019; Leung et al., 2021; Izzaty, 2018) and adolescents (Federico-Pulido & Francisco-Herrera, 2018; Soni et al., 2020). However, limited research on what cultural, social, and psychological factors might facilitate happiness among children and adolescents with special needs.

Children with autism spectrum disorder (ASD) commonly struggle in precisely recognizing and expressing their emotions, which in turn, affect their capacity to appropriately respond to others in various situations (Attwood et al., 1988; Rieffe et al., 2007) A plausible reason accounting for this involves the diminished activation in the amygdala, a part of the brain that is typically associated with expression of emotional responses, which may consequently result in inability to recognize emotional cues based on others’ facial and eye expressions (Baron-Cohen et al., 1999; Critchley et al.2000; Dziobek et al., 2006). Although children and adolescents with ASD might lack the capability to effectively identify positive emotional states including happiness (Nuske et al., 2017; Hill, 2004), researchers have found that the happiness of ASD children and adolescents may revolve around mental well-being and social relationship conditions (Adams et al., 2020; American Psychiatric Association, 2013; Lung et al., 2019; Lord et al., 2020). As happiness serves as an important quality of life indicator, it is essential to identify factors that foster this optimal psychological state among children and youth with ASD.

Therefore, in this review article, we summarize specific personal, social, and contextual factors that facilitate happiness among children and adolescents with ASD. Personal factors include self-esteem, personality, and emotional awareness. The roles of different social agents such as support from parents, family, peers, and teachers are also elaborated. Contextual factors encompass inclusive education policies in different regions and countries to

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promote well-being among students with SEN. We also describe the theoretical and practical implications of these studies in promoting happiness in children and youth with autism and related developmental disorders.

**Personal Factors and Happiness among Students with ASD**

In terms of personal factors, self-esteem has been found to be a key predictor of happiness (Diener et al., 2003; Hart et al., 2021). Self-esteem could be defined as the general evaluation towards one’s perceived value, which might involve positive and negative appraisals (Hewitt, 2020). High self-esteem could help to construct better interpersonal relationships, improve mental health, facilitate academic achievement and thus might promote well-being (Lavy & Eman, 2020). Teenagers with ASD have a higher tendency to have low self-esteem (Williamson et al., 2008) as they tend to devalue themselves possibly due to a sense that they are not capable of understanding others’ viewpoints compared to typically developed teenagers (McChesney & Toseeb, 2018). Youth with ASD might perceive themselves negatively as they might have lower social competence compared to children with typical development (Bauminger et al., 2004; McCauley et al., 2019). Children with ASD tend to see themselves differently and think that it would be difficult to integrate and interact with typically developed peers (Williams et al., 2019). If children and adolescents with ASD can boost their self-esteem, it may be easier for them to build and maintain friendships with their peers (Danker et al., 2019). Increased self-esteem may also serve as the first step to having higher levels of happiness by enabling them to have more social competence among kids with ASD. Apart from increasing interpersonal skills, self-esteem could promote happiness by maintaining or improving psychological health (Ito & Kodama, 2005).

Terror management theory (TMT; Greenberg et al., 1986; Pyszczynski et al., 2004) is one of the psychological perspectives that might account for the benefits of self-esteem on well-being outcomes. TMT posits that human beings experience anxiety due to the inevitability of death (Harmon-Jones et al., 1997) so they are likely to find opportunities to gain self-esteem to cope with death-related anxiety (Mehlman & Snyder, 1985). In other words, the realization that life is scarce may enhance individuals’ tendencies to engage in self-protective strategies including self-esteem, which potentially buffer against concerns about death. Studies have shown that individuals with higher self-esteem are likely to experience increased happiness (Baumeister et al., 2003; Dogan et al., 2013).

Low self-esteem can lead to depression as it may influence individuals to activate negative perceptions about themselves and excessive dependence on others (Sowislo & Orth, 2013). Further, adolescents with low self-esteem have higher risk for depression as they transition into adulthood (Steiger et al., 2014). A systematic review indicates that self-esteem is negatively associated with risky health behaviors (e.g., alcohol abuse) while self-esteem could be a possible indicator to recognize adolescents who are at risk (Arsandaux et al., 2020). There is also evidence supporting the link of self-esteem to better academic performance in school contexts (Duraku & Hoxha, 2018).

Adolescents with ASD have increased risks of having depression because they tend to have lower levels of self-esteem as they have a negative perception towards their social adaptation conditions and personal limitations (Hames et al., 2013; Ogawa & Kojima, 2020; Trześniwski et al., 2006). It is essential to boost these students’ self-esteem to decrease the presence of depression, anxiety, or other negative emotions by building up self-awareness (Ginsburg et al., 1998; Greenberg et al., 1992). Indeed, children and adolescents with ASD who have more self-esteem by having self-appreciation to their strength with positive self-evaluation would tend to have more pleasant feelings, fewer negative emotions and thus their happiness level could be facilitated. Further, drawing from sociometer theory (Leary et al., 1995), self-esteem serves as a concrete indicator of one’s value among the interpersonal values, which relate to social acceptance and rejection by the others (Leary et al., 1995). Children with a higher level of self-esteem would obtain and recognize stronger bonding in social relationships (Magro et al., 2019), establish and maintain constructive relationships in social life which are positively associated with happiness in the society with high relational mobility (e.g., have sufficient opportunity to select the desired social relationships) (Yuki et al., 2013).

Personality is conceptualized as the individual characteristics that shape one’s behavior and make the individual distinctive (Fesit & Fesit, 2007). Personality would affect the emotional perceptions, emotional reactions towards life events and affect the perception of happiness by having different interpretations based on the details happening in the life events (Kim et al., 2005). Personality has been another factor linked to happiness (DeNeve & Cooper, 1997; Schriber et al., 2014). Different scholars have tried to explore the association between personality and subjective well-being (Costa & McCrae, 1980; Deneve & Cooper, 1998; Lucas & Fujita, 2000; Steel et al., 2008).
by investigating the linkage between personality traits and components of well-being (e.g., impact of extraversion on positive emotions).

The Five-Factor Model of Personality indicates that there are five principal traits that are generalizable across cultures such as openness, conscientiousness, extraversion, agreeableness, and neuroticism (Goldberg, 1990; Goldberg, 1993; McCrae & John, 1992; McCrae & Costa, 1987). Among five personality traits, extraversion and neuroticism served as consistent antecedents of happiness in which extraversion is positively correlated with pleasant emotions while neuroticism is positively correlated with unpleasant emotions (Lucas & Fujita, 2000; Fujita, 1991; Furnham & Irene, 2007; Joshanloo, 2018). Extraversion and neuroticism have been significantly linked to individuals’ emotional responses to events or situations that happened (Canli et al., 2001; Kim et al., 2005; Tamir et al., 2002). Specifically, whereas extraversion has been strongly and positively linked to positive emotions (Soto & John, 2017; Ziapour et al., 2018), neuroticism has been positively correlated with negative emotions. More extroverted individuals tend to be responsive to positive emotions while those with higher neuroticism would be more responsive to negative emotions (Diener et al., 2003). The problems and achievements of individuals with ASD facing in their life could be explained by their personality traits profile to a certain extent, for instance, negative impacts (e.g., internalizing and externalizing problems), which threaten their well-being would appear if the individuals with autism have turbulent personality traits (e.g., high level of neuroticism) (Jennifer et al., 2019). Further, lower levels of extraversion, agreeableness, conscientiousness, clarity of self-concept and openness would be possessed by individuals with higher characteristics of autism while the deficits of the above personality traits would cause adverse results in the well-being of individuals with autism (Rodgers et al., 2018). Personality traits could be a predictor for camouflaging which is strongly bonded with the mental health well-being of individuals with ASD (Robinson et al., 2020). Neuroticism is positively correlated with camouflaging among people with ASD (Robinson et al., 2020) and people who are easier to be worried would often perform camouflaging (Hull et al., 2019) while individuals with autism are more likely to have higher levels of neuroticism (Jennifer et al., 2019). Camouflaging is the technique (e.g., practising eye contact) often used by individuals with autism in order to mask their characteristics of autism (e.g. social difficulties) and increase their social competence inclusively (Hull et al., 2017; Bargiela et al., 2016). People with ASD use camouflaging which aims at establishing friendships with individuals without autism, being socially engaged and avoiding being bullied or being discriminated (Cage et al., 2018; Hull et al., 2017; Tierney et al., 2016).

There are specific reasons that account for the beneficial role of extraversion in well-being. For example, the capacity of extraversion to promote perceived social support serves as a mechanism that explains why this personality trait boosts mental health (Boyraz et al., 2012). This is because extroverts are more likely to recognize the support of their family and friends which in turn, enhance happiness (Tan, 2018). It enables the individual to tackle the challenges and difficulties more effectively and easily with social support and finally foster their happiness. Further, extraverted individuals are susceptible to espouse higher levels of hope, which consequently facilitates well-being (Tan, 2018). On the other hand, individuals with high scores in neuroticism are less likely to engage in active social interaction with others (Hughes et al., 2020).

Students with ASD are more neurotic, less extraverted, conscientious, lower agreeableness and less acceptance for new experiences when compared with typically developing children and adolescents (Schriber et al., 2014). Among the Big five personality traits, low agreeableness and high neuroticism are the ones that strongly correlated with internalized and externalized problems among individuals with ASD (Schriber et al., 2014). A later study also indicates that the severity of autism is positively associated with neuroticism while negatively correlates with agreeableness (Schwartzman et al., 2016). Individuals with higher severity of autism features would result in hindering their happiness and self-esteem which affect their well-being (Rodgers et al., 2018).

Performing actions that reflect extraverted tendencies has been considered as a potential route to foster happiness (Zelenski et al., 2012). For example, engaging in meaningful social interactions and conversations has been associated with higher levels of well-being (Fleeson et al., 2002; McNiel et al., 2010; Zelenski et al., 2012). As students with ASD are likely to demonstrate higher introversion than typically developing children, it is likely that activities that do not require too much social interactions can boost happiness and other positive emotional states among children with ASD. Given the existing evidence regarding the stability of personality traits and how these dispositional factors correlate with well-being, (Headey & Wearing, 1989; Magnus & Diener, 1991), it is essential to consider person-activity fit when designing happiness-increasing interventions for students with ASD.
Research has shown that the effects of extraversion on happiness could be mediated by social support (Tan, 2018). If students with ASD are less comfortable initiating social interactions, it is more likely that they may have lower perceptions of social support (Humphrey & Symes, 2010), which in turn, might result in reduced likelihood of experiencing happiness. Further, those with high levels of neuroticism are less likely to experience well-being as they have restricted tendencies to join socially engaging activities (Hughes et al., 2020).

Apart from personality, emotional awareness has been a psychological factor that has been associated with happiness among children with ASD (Szczygiel et al., 2012). Emotional awareness is defined as the capacity to recognize and narrate personal and others’ emotions (Lane & Schwartz, 1987), which operates as the foundational competence of emotional intelligence (Lane, 2000). It is common for children with ASD to report lower levels of emotional awareness as they are likely to have a limited understanding of either positive and negative emotions (Rieffe et al., 2007). Fostering emotional awareness is essential to boost psychological health especially among young children (Nuske et al., 2017). Given their limited capacity to recognize negative emotions, children with ASD might experience difficulty in recognizing their anxiety, stress, or other unpleasant feelings, which might cause accumulation of negative emotions and finally reach a critical point that might be difficult to manage. Children and adolescents with ASD have a higher risk of having psychiatric disorders because of their autistic features (Nuske et al., 2017; Redquest et al., 2020; Reinvall et al., 2016). However, it has been shown that the unfavorable effects brought by negative emotions could be staved off by increased emotional awareness (Szczygiel et al., 2012). If teenagers with ASD have higher attentiveness to their negative emotions (Begeer et al., 2010) instead of ignoring them (Macari et al., 2018), it might enable them to have better mental health conditions and the risk of suffering from psychological disorders would be greatly decreased.

Further, emotional regulation is important to minimize the drawbacks brought by negative emotions (Szczygiel et al., 2012). Emotion regulation has been defined as the process of perceiving, undergoing, and expressing emotions (Gross, 2008). Cognitive reappraisal, which reevaluates emotional experiences with a more positive interpretation, and expressive suppression, which mask and avoid expressing emotions are two common forms of emotion regulation strategies (Berkling & Wupperman, 2012). The difficulty in emotion regulation is significant among children with ASD (Loveland, 2005; Prizant et al., 2003) in which they have more challenges in regulating negative emotions (Nuske et al., 2017). Children and adolescents with ASD tend to have unpleasant feelings because of limited prospects for building and maintaining interpersonal relationships (Lord et al., 2020). Children with ASD might fail to respond to the emotional stimuli or events with effective emotional regulation strategies and thus express their emotions by aggression or outburst (Sofronoff et al., 2007). Cognitive reappraisal is being broadly considered as an effective emotion regulation strategy as it is positively correlated with mental health while expressive suppression is associated with psychological problems and is negatively linked with mental health (Hu et al., 2014). Therefore, with appropriate emotion regulation, the youth with ASD could alleviate or reduce their negative emotions by lowering the possibility of facing failure in social relationships and their academic study (Jahromi et al., 2012) and thus might increase happiness.

**Social Factors and Happiness among Students with ASD**

There is evidence highlighting the role of social factors such as family, parents, teachers, and peers in happiness among children and youth with ASD. Forming and maintaining friendly relationships and strong ties with family and peers are being commonly observed among happy children with autism (Guhn et al., 2013; Holder & Coleman, 2009). Strong bonding with family members and friends is also significant for the happiness of adolescents with ASD (Franke et al., 2019; Mazurek & Kanne, 2010). Family plays an important role in children with ASD’s happiness as family acts as their backup and protection in daily life and family is the first relationship built among ASD individuals (Lord et al., 2020). Unexpectedly, unhappiness among ASD children mainly comes from their families (Rieffe et al., 2007). Therefore, family members of ASD children are encouraged to resolve any conflicts or misunderstandings with them to maintain smooth family relationships, which largely contribute to well-being of children with such special needs.

In addition, having increased positive emotions from friendly relationships with family members, children with ASD may reduce the likelihood of experiencing maladaptive psychological states (Burman & Margolin, 1992). It is plausible to reduce the risk of having a mental illness of the youth with ASD by promoting family companionship (Kashani et al., 1995). To summarize, positive family relationships enhance the children and adolescents with ASD...
to relieve the stress or negative feelings that they suffered during growth which enables them to have better psychological well-being with the closeness from the family.

Within the family context, parents are the core members who play an essential role in catalyzing happiness among children and youth with ASD. Parents are commonly most familiar with their own children’s personality, temperament, and emotional responses. A close parent-child relationship serves as a route to building self-esteem of children with ASD (Dissanayake et al., 2020). Specifically, parents who engage in positive parenting behaviors are likely to boost children’s emotional well-being (Stone et al., 2016). Parental beliefs and expectations towards their children may carry more significant weight than that of the teachers in school as parents usually interact with children since birth (Kohler, 1999). For children, the expectation from parents is positively correlated with their developmental outcomes in which having positive expectations from parents would result in positive and satisfactory developmental results (Mutua, 2001). Based on the expectancy theory (Bandura, 1995), if the parents of children with ASD have a strong expectation and beliefs about what may make their kids happy, they may try nurturing their children with appropriate parenting style to ensure their children could have a happy childhood and positive growth (Ivey, 2004). These expectancies and beliefs, however, may potentially contribute to exacerbating parenting-related stress among children with ASD (Hoffman et al., 2009; Rao & Beidel, 2009) largely because of their children’s autistic features (Brown et al., 2011; Ingersoll & Hambrick, 2011).

Parents are encouraged to avoid having excessive worrying or concerns for their ASD children as it might increase the stress of the children under the parenting (Bitsika & Sharpley, 2015). This is because the increase of parenting stress may correspondingly inflate children’s stress. Emotional transmission might happen as the parents’ emotions –especially the negative ones such as stress and anxiety– might have a negative impact on their children with ASD’s emotional and behavioral development (Zhou & Yi, 2014). Stress from parenting might promote negative emotions (e.g., anger) in children with ASD (Siu, 2019). The increase of children with ASD’s emotion reactivity could be one of the internalizing behavior problems which is a negative impact caused by parenting stress from their parents (Lin, 2021).

Thus, it is important to reduce parenting stress to provide more opportunities for children with ASD to experience positive feelings or sense achievements (Nelson et al., 2014). These children with complex needs are likely to espouse positive attitudes and emotional states when they are socialized to desirable emotional states in parent-child interactions (Pomerantz et al., 2007). In addition, emotion regulation may serve as an integral feature of parental education given its possible contributions in the promotion of mental health of children with ASD. Emotion regulation is the adjustment and modulation of one’s own emotions to match with the corresponding circumstances or to reach for the personal aim (Hoeksma et al., 2004; Thompson, 1994). There are different types of emotion regulation strategies. Overall, emotion regulation strategies could be classified into three levels, control of attention, reappraisal cognitively, and modulating the emotion response (Aday et al., 2017; Webb et al., 2012). Emotion regulation could be generally categorized into adaptive strategies which include reappraisal, acceptance, and problem-solving while the maladaptive strategies include avoidance, suppression, and rumination (Aldao et al., 2010). However, the common emotion regulation coping strategies used by children with ASD including the avoidance and venting behaviors are ineffective for tackling negative emotions while the parental relationships and parenting style would demonstrate and strengthen the emotion regulation techniques for ASD children (Hirschler et al., 2015).

Teachers’ and peers’ support are also important social factors in boosting happiness among children and adolescents with ASD. In school, students would commonly interact with teachers which serves as a foundation for establishing optimal teacher-student relationships (Feldman et al., 2019). It is also important for these students with exceptionalities to establish friendships with their peers in school to boost their social competencies (Kalyva & Avramidis, 2005). Therefore, students with ASD might have social network support from teachers or peers in the school setting. It is noticeable that children with ASD tend to depend on older adults in completing tasks (Jahromi et al., 2012). Teachers commonly guide students with ASD with academic and non-academic activities. Having a friendly and positive teacher-student relationship may increase the positive consequence experienced by the children with ASD and promote their sense of acceptance within the classroom setting (Robertson et al., 2003). Consistent with this argument, as the social status of the students with ASD in the classroom is positively correlated with the inclusive attitude of teachers, students with ASD could be easier to be included and integrated with typically developed classmates and reduce the risk from being isolated by the support of positive and inclusive relationships with teachers (Humphrey & Symes, 2010).
Furthermore, peers can also contribute to increasing happiness among individuals with ASD. Adolescents with ASD have a higher risk of being bullied which causes them to have a decreased level of happiness (Lung et al., 2019). Because of their autistic characteristics such as difficulty in understanding social behaviors and others’ perspectives, children with ASD tend to have difficulties in making friends or being easier to have conflicts with peers (Schroeder et al., 2014). However, having supportive friends is the safeguarding factor for being bullied (Lung et al., 2019). Importantly, having good friends to count on is essential to enhance their self-esteem and social communication skills (Currie & Inchley, 2016). Adolescents with more social support would have more discerned happiness (Moreno et al., 2009). With harmonious friendships or friendly peers, children and adolescents with ASD might have a lower opportunity to struggle with others’ feelings and avoid misunderstandings from happening in which the possibility of being bullied would be greatly reduced (Currie & Inchley, 2016; Schroeder et al., 2014).

**Contextual Factors and Happiness among Students with ASD**

Contextual factors affect happiness among children with ASD. Students with ASD could act happier with some specific circumstances while their presence of happiness behaviors has been linked to subjective happiness (Green et al., 1988). There are specific types of environmental and contextual factors that have been found to influence well-being among students with autism. Reinforcement of preferred tangibles (e.g., favourite toys or chocolate) or favourable social attention could boost higher level of happiness behaviors and sense of engagement among students with ASD (Thomas et al., 2021). Furthermore, some tangible reinforcers may also enhance the presence of happiness behaviors among ASD children, while it might be associated with their stereotyped interest to a certain extent (Thomas et al., 2021).

Moreover, environmental factors could help promote happiness among children and adolescents with ASD. Inclusive education has become an international issue among education policy worldwide by having students with and without special educational needs to learn together in the general education system (Boyle & Sharma, 2015; Entrich, 2021). The supportive and individualized resources and arrangements provided by the school are essential for meeting the needs of the students with such social and communication deficits while they might have a more comfortable and positive feeling for learning instead of having the sense of being eliminated (Danker et al., 2019). The school may consider arranging different extracurricular activities and academic programs for students with ASD to explore their strengths and talents to build up self-esteem which is important for the construction of happiness (Danker et al., 2019; Williamson et al., 2008).

Aside from the school’s resources and accommodation, establishing an inclusive attitude among members in the school can serve as positive catalysts of happiness of children and adolescents with ASD. Acceptance and respect are the keys to having an inclusive attitude while ASD students, especially those undergoing inclusive education in mainstream schools are strongly sensitive to the acceptance among teachers and classmates (Danker et al., 2019). All the school members should recognize ASD as an individual difference instead of the disability, show respect to the differences and treat the ASD students equally without labeling them with stigma. All the members of the community should share the same inclusive attitude towards individuals with ASD. If everyone in school and the community could show acceptance, respect, and understanding towards ASD individuals, it is believed that the negative impacts or drawbacks brought by ASD could be minimized while ASD children and adolescents could construct a positive and optimistic life in their growth.

The educational policies initiated and implemented by the government in different contexts are another important factor for influencing the well-being of students with ASD as governments’ policy in education could be the exosystem in children’s development (Bronfenbrenner, 1979). Policies about inclusive education or guaranteeing the rights of education for students with disabilities or special educational needs might influence the inclusive education’s policy making of the government in different cities or countries. The Convention on the Rights of the Child (United Nations General Assembly, 1989) has emphasized that education is a lawful and equal rights for all children, even for children with disabilities. It ensures the rights of education for all children and adolescents, regardless of their disabilities or learning difficulties. Article 24 of the Convention on the Rights of Persons with Disabilities Pointed out that all individuals with disabilities should be included and be supported with effective accommodations and modifications in the general education system (United Nations, 2006).
The Hong Kong government has designed and implemented the three-tier intervention model scheme specifically for students with ASD among the public mainstream schools since the year 2020 (Education Bureau, 2019). Considering the special educational needs and the autistic features, the model consists of three goals for improving students with ASD’s adaptation in the emotional, social, and learning aspects (Doris et al., 2016). The level of support provided in the scheme increases from tier one to three in which supports students from universalist to a personalized approach. For tier-one interventions, schools usually require mental health professionals (e.g., school psychologists and counselors) to design school-wide interventions that are usually administered to both typically developing students and those with special needs. For tier-two interventions, students who were identified as at-risk of developing mental health or learning issues via implementing tier-one interventions, will be invited to attend small-group intervention that can address their psychological or educational concerns. Tier-three interventions are the most specialized services, which are usually provided to students identified from tier-one and tier-two interventions who exhibited severe symptoms of social, emotional, and behavioral disorders.

Singapore improves and promotes its inclusiveness in education by declaring that students with SEN would also be included in Singapore’s compulsory primary education with the Compulsory Education Act (Teng & Goy, 2017). It allows students with SEN from being eliminated and isolated from the national education system and they are being guaranteed to have equal opportunity to receive education. In order to ensure and promote the effectiveness of learning among students with SEN, the Singapore government requires mainstream primary schools to have at least one teacher specialized with the knowledge about special education to increase their teaching efficacy and learning progress of the children with learning difficulties (Strogilos et al., 2019). It would facilitate the understanding of information and knowledge among students with SEN with the guidance and support from the professional special education staff in the inclusive education context and the students could perform better in their academic tasks which might promote their well-being.

For western countries, the United States (US) and Australia have also implemented inclusive policies and practices to enhance inclusive education and meet the needs of students with special educational needs (SEN). Children in the US are allowed to have Free and Appropriate Public Education within the Least Restrictive Environment under the Individuals with Disabilities Education Act (Russo, 2019). Students with SEN would be learning and studying with their typically developed peers with the general education curriculum and they would only be studying in special schools or hospitalized schools, which is a more restrictive environment if their severity of SEN greatly inhibits their learning under regular context (Hossain, 2012; Sokal & Katz, 2020).

In the US, three quarters of children with SEN would receive education under regular context with other typically developed children (National Education Association, 2009). It would maximize the opportunity for students with SEN to interact and communicate with students without SEN and have a further equal education basis with them. Students with ASD would be taught by using methods of social skills instructions, strategies of augmentative and alternative communication and applied behavior analysis for their easier understanding of academic topics while some job skills training with specialized and assistive instructions would be provided for adolescents with ASD in order to enhance their well-being after graduation (McLeskey et al., 2009). Indeed, implementing policies related to supporting the learning and mental health needs of students with autism can potentially promote psychological wellness in diverse cultural contexts.

**Discussion**

Although numerous works have been done to summarize predictors of happiness in typically developing students, there is scarce literature on the antecedents of well-being outcomes in students with diverse forms of exceptionalities. This review focuses on summarizing selected personal, social, and contextual factors that facilitate happiness among children and youth with autism spectrum disorders.

Given that self-esteem has been found to be a salient predictor of well-being outcomes even for students with autism, families, and schools are encouraged to provide opportunities for students with autism to experience positive appraisals of themselves. For example, as individuals with ASD are more likely to be discriminated by others (Soffer & Argaman-Danos, 2021) which can deplete their self-confidence, it is important to provide pathways for them to discover and enhance their talents. Designing and implementing strength-based programs serves as a possible route to cultivating psychological wellness among students with autism. As some students with ASD may have good visual perception skills (de Schipper et al., 2016) and innovative and critical thinking (Best et al., 2015; Hough & Koenig, 2014), schools may organize talent development programs that can help these vulnerable students realize
their fullest potential. These strength-based initiatives can potentially foster positive social identity and optimal psychological functioning among students with autism (Cooper et al., 2017; Lee et al., 2020).

Among different programs, sports program seems to be the most common intervention within schools and community settings which can enhance social well-being among students and adolescents with ASD. Physical exercises have been found to be effective in decreasing the externalizing behaviors and improve the social competence of students with ASD (Healy et al., 2018; Lang et al., 2010). For example, a golf training program with the involvement of interpersonal skills (e.g., praising or commenting on another player) enables students with ASD to have significant stimulation and enhancement on their receptive and expressive social skills (Shanok et al., 2010). A meta-analysis has shown that physical activities (e.g., horse riding), especially for group-based sports programs (e.g., football and multi-sports camp) have a significant positive impact on social competence for individuals with ASD (Howells et al., 2020). The participation of students with ASD in group-based sports programs would facilitate their potential for social interactions (e.g., discuss tactics and collaborate with groupmates) and thus generally increase their social functioning (Howells et al., 2019).

Effective coaching approaches in physical activity programs might encourage children and adolescents with ASD to have better social engagement during the process (Rosso, 2016). Students with ASD do not have sufficient motivation to socialize and participate in the sports program (Todd & Reid, 2006). A coach equipped with comprehensive knowledge about ASD to cater to the needs and difficulties of students with ASD in the program might increase their engagement motivation (Ohrberg, 2013). Organized group selection from pairing up to a larger group gradually by referring to the feedback from students with ASD and providing appropriate reinforcement would facilitate systematic socialization growth without being pressured or panicked (Rosso, 2016). Indeed, interactive and group-based intervention programs might have the potential to boost not only personal but also social aspects of well-being among students with ASD (Bailey et al., 2020; Lee et al., 2020).

As prior research has also established considerable links between contextual factors and happiness among individuals with ASD in different societies, there is a need to advocate for community-based initiatives to promote mental health among children and youth with autism. For example, research shows that a social platform built via collaboration between researchers and students with ASD yielded desirable interpersonal outcomes in school contexts (Zhu et al., 2021). In the program, individuals with ASD have more self-advocacy, self-awareness of their personal needs and difficulties, and functionally voice out their needs to others in social network settings (Zhu et al., 2021). By developing an appropriate social platform for individuals with ASD, the relationships with family, friends, or other community members could be maintained and enhanced, especially they usually lack social networking in usual settings (Rowley et al., 2012).

Beyond the role of personal, social, and contextual factors, special needs practitioners, educators, and allied health professionals are recommended to integrate technological innovations when addressing the mental health needs of students with ASD. For example, schools may consider integrating virtual reality technological platforms that cultivate positive character in social emotional learning curricula such as teaching emotion recognition and expression (Ghanouni et al., 2019). Harnessing traditional and technologically driven approaches may serve as an inclusive approach to promote social emotional learning in children and youth with diverse needs, especially that the unpredictable COVID-19 pandemic situation in different contexts might shift the typical face-to-face mode of lesson delivery to online arrangements. Parents and primary caretakers of students with ASD can also explore the use of social narrative approaches via social media platforms to provide an alternative pathway for their children to learn academic and social-emotional learning competencies.

However, this review has some limitations. As a narrative approach was adopted to summarize prior studies on the antecedents of well-being among students with autism, it is likely that other published and unpublished investigations were not covered in this article, which inflates the likelihood of selection bias. Future studies are encouraged to use systematic and meta-analytic review designs to generate more rigorous evidence on how personal, social, and contextual matter for well-being outcomes among students with ASD. Given that this review only concentrated on predictors of happiness among students with autism, findings have scarce relevance for students with other related forms of developmental disorders. Future researchers may consider exploring intrapersonal and interpersonal factors that facilitate psychological wellness among children and youth with other forms of developmental disabilities.
Conclusions
The growing evidence on the importance of teaching happiness in school contexts underscores the value associated with promoting well-being in students. However, as most evidence concentrates on the role of dispositional, social, and contextual factors in typically developing children and adolescents, conclusions from these studies may carry limited generalizability to students with special needs and disabilities. This review article focuses on summarizing selected personal, social, and environmental factors that facilitate happiness in students with autism spectrum disorder. Whereas personal factors such as personality, emotion regulation, and self-esteem serve as intrinsic resources that predispose children and adolescents with ASD to experience more adaptive psychological states, social factors such as perceived social support from key social agents (e.g., parents, siblings, teachers, and peers) and school belongingness operate as interpersonal resources that provide opportunities to foster these students’ relatedness needs. Further, it is hard to discount the critical roles of tangible environmental resources (e.g., curricular or co-curricular programs) and government policies in supporting optimal emotional development among students with social and communication difficulties. Indeed, the promotion of happiness in students with ASD entails designing holistic school-based interventions that weave together internal, social, and contextual factors that can boost well-being outcomes. We hope that this article can contribute to the current discourse on how to increase access to well-being programs for students with atypical social emotional development in different cultural settings.

Compliance with Ethical Standards

Ethical Standards
The ethical review application was not needed as this research did not require the collection of data with human participants.

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References


Education Bureau, Hong Kong Special Administrative Region. (2019, October 3). *Education Bureau to enhance support for students with autism spectrum disorders*. [Press release]. https://www.info.gov.hk/gia/general/201910/03/P2019100300291.htm


