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ORIGINAL PAPER

Self-reported Everyday Sources of Happiness and Unhappiness in Autistic Adults

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Abstract
Purpose: Daily mood can be influenced by a range of experiences. Identifying everyday life experiences that make autistic adults happy and unhappy holds potential to foster positive mood and tackle mental health problems amongst this group. **Methods:** A total of 293 autistic adults between the ages of 18 to 35 years old (mean age of 26.51 years old ($SD = 4.62$); 43.3% female gender, 4.8% nonbinary) provided open-text responses regarding everyday sources of happiness and unhappiness. Using an iterative process of inductive coding, 14 happy themes and 22 unhappy themes of mood-changing life experiences were identified based on self-report qualitative data. **Results:** Common themes across the happy and unhappy domain involved social partners, social interactions, and engagement in recreational and employment activities, with additional distinct themes specific to happy or unhappy mood. Top themes identified in the happy domain emphasizes encouraging quality relationships and positive interactions with others and cultivating supportive work/societal environments to build a sense of achievement and value. Meanwhile, emotional tolls accompanied negative relationships and interactions, underscoring the necessity to provide autistic adults with conflict resolution and coping skills to increase feelings of happiness. **Conclusion:** Overall, the wide range of sources of happy and unhappy everyday experiences highlights the importance of considering personal preferences in engagement with others and activities in treatment.

Keywords Mood · Happiness · Daily life experiences · Autism · Adulthood · Qualitative study

Daily life experiences contribute to daily fluctuations in mood (Clark & Watson, 1988), and prolonged negative emotional experiences affect long-term mood leading to depression (Cummins, 2010; DSM 5, APA 2013). Therefore, understanding everyday sources of emotional experiences could provide opportunities for prevention and intervention to decrease negative moods, while fostering positive experiences to increase wellbeing and quality of life (de Vries et al., 2021). This knowledge will be particularly beneficial for supporting autistic adults given the observed high rates of mental health challenges in this special population (Hollocks et al., 2019; Zheng et al., 2021). As far as we know, no prior studies with autistic individuals have specifically investigated how autistic adults perceive the effects of everyday experiences on their mood, limiting research progress in identifying precise treatment targets to improve psychological wellbeing.

There has been a body of qualitative literature examining sources of happy and unhappy moods in neurotypical adults. Life experiences that promote happiness amongst neurotypical adults revolve around achievements, social interactions, relationships, work, religion, and engagements in leisurely activities (Liu & Da, 2020; Sun et al., 2020). These findings were further supported by quantitative studies detailing these associations. For example, high-quality daily interactions within personal and professional relationships, such as romantic partners, friends, family, and co-workers, could increase feelings of happiness (Choi et al., 2017; Ishii-Kuntz, 1990). Conversely, negative social experiences, such as being bullied or experiencing workplace incivilities, are predictive of negative mood (Theorell et al., 2015; Tremmel

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& Sonnentag, 2018). Furthermore, job-related experiences, particularly work-related stress/strain, and job performance, security and satisfaction, have also been associated with well-being and mental health outcomes in the general population (Jurado et al., 2005; Theorell et al., 2015). The current study aims to build on the influential life aspects that arose from the research on neurotypical adults to identify themes of self-reported experiences that may affect the moods of autistic individuals.

Qualitative data are informative and necessary in gathering rich information based on stakeholders' lived experiences (Swanson & Holton, 2005). Since the 2014 publication that highlighted the dearth of qualitative studies on the lived experiences of autistic adults (Bölte, 2014), there has been an increasing number of qualitative investigations in the field. In a meta-synthesis of qualitative studies on autistic lived experiences, DePape & Lindsay (2016) identified four common themes among the published qualitative studies: (1) perception of self, (2) interactions with others, (3) school experiences, and (4) employment, which were mainly restricted to the impact of specific symptoms related to autism (such as difficulties with sensory experiences; Robertson & Simmons, 2015) or specific life domains (such as vocational difficulties or social challenges; Müller et al., 2008, 2003). Since then, qualitative studies on autistic adults have become more expansive, covering themes such as friendships and relationships (Sala et al., 2020; Sosnowy et al., 2019), the diagnostic process (Huang et al., 2020a; Mason et al., 2019), coping strategies (Ghanouni & Quirke, 2022; Hull et al., 2017), and gender related challenges and experiences (Coleman-Smith et al., 2020; Milner et al., 2019). Only one qualitative study on autistic adults directly addressed negative mood (Jordan et al., 2021), and specifically focused on how adults experienced low mood and depression. No study to date has directly surveyed autistic adults on specific experiences as a source of their emotional states. Thus, we initiated this current study to fill this gap in the literature.

Many autistic adults report a range of challenges across multiple domains of life that have been linked to mental health problems, including stigma, limited quantity and quality of social interactions and relationships, and high rates of unemployment and underemployment (Baldwin et al., 2014; Cage et al., 2018; Hendricks, 2010; Mazurek, 2014; Orsmond et al., 2013). To capture a wide range of experiences that could affect mood, we analyzed open-ended survey responses from a large number of autistic adults using qualitative methods. We aimed to capture themes of self-reported daily life experiences that make autistic adults happy or unhappy, thus providing important information on how to identify a range of treatment targets that improve mood in autistic adults (Hurlbutt & Chalmers, 2002).

Method

Participants

Participants were recruited through the Simons Foundation Powering Autism Research for Knowledge research registry (SPARK Consortium, 2018) for a larger study on depression in autistic adults (Zheng et al., 2021). A sample of 315 young adults was recruited to complete online surveys for an incentive of a $25 gift card. Participants included in the study: (1) were able to consent for oneself; (2) were between the ages of 18 to 35 years old; (3) received an autism diagnosis from a professional prior to turning 18; and (4) completed the SPARK Background History Form. While all diagnoses were self-reported, a recent study (Fombonne et al., 2022) showed good validity of the self-reported autism diagnosis of SPARK registrants through reviews of electronic medical records. The study sample is represented by autonomous young adults with a mean age of 26.51 (SD = 4.62): 43.3% identified as female gender (4.8% identified as nonbinary), 18% non-White, 38.4% with high school degree or below, 48% unemployed, 63% single, and 48.1% reported having had received a depression diagnosis at some point in life. A subsample of 293 young adults provided open-text responses to questions about what made them happy and unhappy, and therefore was included in the current analysis. Table 1 shows demographic characteristics of both the current analytic sample (N = 293) and the full sample (N = 315), where the current analytic sample has similar characteristics and is representative of the full sample. Study procedures were reviewed by Participant Advocacy Committee at SPARK and approved by the Internal Review Board at the authors' institutions.

Table 1 *Demographic Characteristics of the Current Analytic Sample (N = 293) and the Full Sample (N = 315)*

|	Current Sample (n = 293)	Full Sample (N = 315)
Age (Mean, SD)	18–35 (26.51, 4.62)	18–35 (26.33, 4.64)
% Non-White	18%	17.8%
% High School Degree or Below	38.4%	38.4%
% Unemployed	48%	48.3%
% Single	63%	62.9%
% Female Biological Sex	48.8%	47.6%
% Female Gender	43.3%	42.2%
% Nonbinary Gender	4.8%	5.6%
% Depression Diagnosis by History	48.1%	46.7%

Fig. 1 *Code Hierarchy*
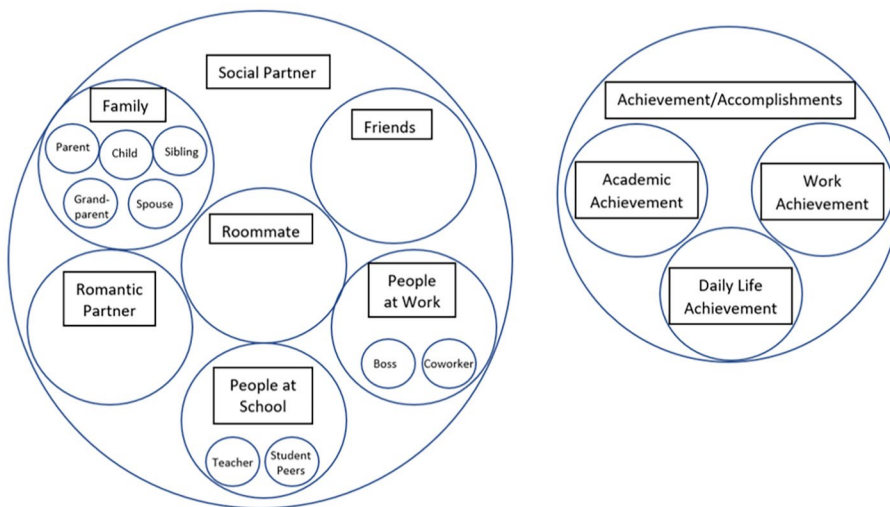
Measures & Analyses

Participants answered two open-ended questions as a part of the online survey: *"Looking back at the past week, what are some of the things that made you happy?"* and *"what are some of the things that made you unhappy?"* Survey responses were analyzed using the Atlas.ti 7 software program (Thomas & Harden, 2008). The current analysis adopted a thematic analysis scheme (Braun & Clarke, 2006), in which all responses were reviewed and coded through an iterative process of inductive coding (Srivastava & Hopwood, 2009). Specifically, a team of four coders first reviewed survey responses and generated initial themes. Themes were reviewed, aggregated, and defined. The initial round of codes was discussed amongst the coders to arrive at a preliminary consensus codebook. The coding team then reviewed the survey responses a second time and assigned refined codes based on the initial codebook. The codebook was reviewed and refined through consensus discussions to generate detailed code definitions. The codes were systematically organized into three hierarchies: sub-codes (bottom level) nested within codes, and codes nested within themes (top level; See Fig. 1). To ensure coding consistency and reliability, all codes assigned to responses were reviewed by at least two coders, and group consensus discussions were held to resolve discrepancies. The final codebook with

assigned responses can be found on the OSF repository: https://osf.io/7nhpc.

Themes were the main level of analysis, and thus, are presented and discussed in the sections below. Specifically, themes were organized by the survey questions into "happy" or "unhappy" domains. To be counted as a theme, 10 or more participants must have endorsed the theme in their response—the codes that fell under themes that were endorsed fewer than 10 times were left as standalone codes. To capture all meaningful information from the responses, the coding team established two rules to allow multiple codes to be assigned to the same response— (1) when responses included multiple components that may qualify for different coding categories, multiple codes could be assigned to each component within the same participant response; (2) if a response or component of a response qualified for more than one identified code, all applicable codes were assigned. For example, "social partners" were often mentioned together with other activities and events; thus the "social partner" code was assigned in addition to other codes to capture all of the life experiences identified. An example response is, *"building my business, spending time with my son"* (27-year-old man; ID 237); This notation following the quote lists the participants' age and gender, followed by their unique identifier (237). *"Building my business"* was assigned the code "work achievement", while

Fig. 2 *Codes with Multiple Components*
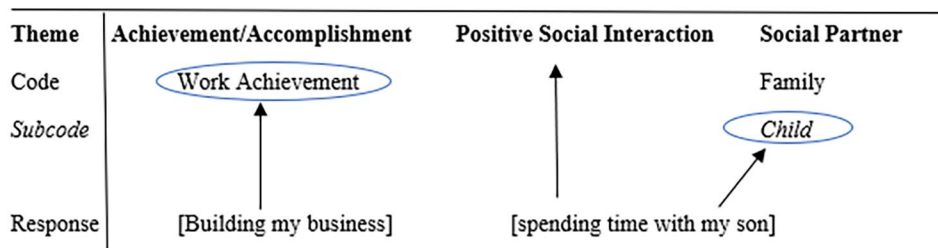
"*spending time with my son*" was assigned the concurrent codes "child" and "social interaction" (See Fig. 2).

Results

Our analysis identified 14 themes from the responses to the question regarding experiences that made participants happy, and 22 themes regarding experiences that made participants unhappy, with 6 themes overlapping in both domains. Most autistic adults surveyed were able to identify at least one thing as the source of happiness or unhappiness

in the past week, with 24 participants (13 in response to what makes them happy and 11 in response to what makes them unhappy) mentioning "nothing" or that they are "not sure." All themes derived from the responses are listed in Table 2. In general, the main source of happiness came from interactions with others, engaging in preferred activities, or satisfaction from accomplishments. Some of the most frequently mentioned unhappy themes were a lack of relationships, employment-related difficulties, and mental/physical health. Also listed per theme is the frequency of responses for the subsample of participants who reported a history of a depression diagnosis versus participants who

Table 2 *Top Themes and Frequencies across Happy and Unhappy Domains*

Themes	Overall Sample (N = 293)[a]	No Depression (N = 152)	Depression Diagnosis by History (N = 141)
"What makes you happy?"			
Social Partner	151 (51.5%)	79 (52%)	72 (51.1%)
Activity	137 (46.8%)	80 (52.6%)	57 (40.4%)
Pet	43 (14.7%)	22 (14.5%)	21 (14.9%)
Social Interaction	36 (12.3%)	20 (13.2%)	16 (11.3%)
Achievement or Accomplishment	30 (10.2%)	19 (12.5%)	11 (7.8%)
Event	25 (8.5%)	19 (12.5%)	6 (4.3%)
Job/Work	24 (8.2%)	16 (10.5%)	8 (5.7%)
Self-Care	18 (6.1%)	9 (5.9%)	9 (6.4%)
Food	15 (5.1%)	10 (6.6%)	5 (3.5%)
Vacation/Travel	12 (4.1%)	7 (4.6%)	5 (3.5%)
Finance	11 (3.8%)	6 (3.9%)	5 (3.5%)
Internet	11 (3.8%)	8 (5.3%)	3 (2.1%)
Material Possessions	10 (3.4%)	4 (2.6%)	6 (4.3%)
Physical Health	10 (3.4%)	6 (3.9%)	4 (2.8%)
"What makes you unhappy?"			
Social Partner	103 (35.2%)	51 (33.6%)	52 (36.9%)
Social Interaction	61 (20.8%)	30 (19.7%)	31 (22%)
Job/Work	61 (20.8%)	30 (19.7%)	31 (22%)
Current Events	59 (20.1%)	37 (24.3%)	22 (15.6%)
Emotional Experience	42 (14.3%)	16 (10.5%)	26 (18.4%)
Physical Health	32 (11.0%)	14 (9.2%)	18 (12.8%)
Mental Health	26 (8.9%)	12 (7.9%)	14 (9.9%)
Finance	23 (7.9%)	8 (5.3%)	15 (10.6%)
Disruptions/Changes in Routine	22 (7.5%)	12 (7.9%)	10 (7.1%)
Lack of Social Interactions	21 (7.1%)	13 (8.6%)	8 (5.7%)
Negative or Unfair Treatment by Others	19 (6.5%)	11 (7.2%)	8 (5.7%)
General Things	19 (6.5%)	5 (3.3%)	14 (9.9%)
Academic/Schooling	17 (5.8%)	10 (6.6%)	7 (5%)
Event	14 (4.8%)	8 (5.3%)	6 (4.3%)
Lack of Activities	14 (4.8%)	8 (5.3%)	6 (4.3%)
Self-Efficacy	12 (4.1%)	6 (3.9%)	6 (4.3%)
Time Management	12 (4.1%)	6 (3.9%)	6 (4.3%)
Living Situation	12 (4.1%)	6 (3.9%)	6 (4.3%)
Environment/Surrounding	11 (3.8%)	5 (3.3%)	6 (4.3%)
Support	11 (3.7%)	3 (2%)	8 (5.7%)
Chores/House Tasks	10 (3.4%)	8 (5.3%)	2 (1.4%)
Difficulties Related/Attributed to ASD	10 (3.4%)	1 (0.7%)	9 (6.4%)

Note: a. Participants could endorse multiple themes in their responses; therefore, the cumulative total exceeds 100%

did not, which generally resembles the patterns observed of the overall sample. The six overlapping themes in the happy and unhappy categories are social partners, social interactions, events, activities, job/work, and physical health. The top seven themes identified the overall sample from both the happy and unhappy domain will be discussed separately in further detail below. All percentages below were reported in reference to the analytic sample of 293.

Everyday Sources of Happiness

Social Partners and Interactions Eliciting Happiness

Social partner(s) was the most frequently mentioned theme in the happy domain. In our coding scheme, the social partner code included any mention of family, friends, romantic partners, people at school/work, housemates, and people in general. Nearly one-third (31.7%) of our sample mentioned family (e.g., "*a great sister*" (21-year-old man; ID 243)), and 22.9% mentioned friends, as sources of happiness during the past week.

Besides simply naming a social partner, interactions with friends, family, and romantic partners that made participants happy ranged from conversational exchanges to physical interactions. Some of the participants valued a combination of the two:

> *The random hugs n kisses she gives, & (the best one): when she walks up to me, puts her hands on the sides of my face, looks me straight in my eyes & says, "Mama, I'm here. I love you."* (28-year-old woman; ID 140)

Some mentioned that social interactions occurred with people the participant encountered online—for example, one participant responded that "*the nice thing about chat rooms is that I can drop out of a conversation at random and nobody will bother me for it, so I can still be social without burning myself out*" (26-year-old woman; ID 25). Additional forms of virtual interactions mentioned included: "*had fun playing games and laughing with online friends*" (31-year-old man; ID 249) and "*my favorite YouTuber did a livestream and gave me a shout out*" (26-year-old woman; ID 170).

Many participants also identified social partners in their engagement of activities and therefore were assigned to concurrent themes. For example, one participant mentioned that "*watch[ing] tv with [her] mom*" (20-year-old woman; ID 134) makes her happy. Both "social partners" and "interactions" were often concurrently coded with the "activities" theme.

Enjoying Activities with Others or by Themselves

A variety of activities were mentioned in participant responses, with 14 codes representing unique categories, such as enjoying the outdoors or making artwork. Examples of activities with social partners included "*coffee date with boyfriend*" (34-year-old man; ID 139) and "*going to the park with my daughter*" (34-year-old man; ID 129); while solitary recreational activities included, "*I've been practicing violin*" (22-year-old woman; ID 64); "*reading a good book*" (24-year-old man; ID 71); "*planting seeds in my garden*" (25-year-old woman; ID 13).

Under the theme of "activities," social activities such as "hangouts/get-togethers" were the most frequently mentioned source of happiness (13.9%), followed by unstructured leisure activities (such as watching movies, TV or YouTube and listening to music; 10.5%)—which sometimes included a mention of social partners. Structured community activities (e.g., attending church or volunteering) were the least frequently mentioned activity (2.6%) within this theme.

Pets as Companions

A subsample of 14.7% of participants mentioned their pet (e.g., "*my dog*" (29-year-old man; ID 15)) as a source of happiness; this included caring for and/or spending time with their pet (e.g., "*a lot of cuddle time with my cat*" (25-year-old woman; ID 3)).

Achievement or Accomplishment

Getting things done, working towards, or reaching a goal elicited happiness for autistic adults. Achievements were categorized into three subcodes: academics (2.7%), work (3.4%), and daily life (1.7%). Academically, one participant mentioned that "*a good grade*" (19-year-old woman; ID 197) induced happiness. Examples of work achievements as sources of happiness include: "*getting pitches accepted*" (27-year-old woman; ID 90) and "*good performance reviews at work*" (23-year-old woman; ID 153). Lastly, besides having reached an end goal, making progress towards something was seen as an accomplishment – like the daily life achievement mentioned by one participant: "*the progress I've made in voice training*" (27-year-old non-binary person; ID 223).

Participation in Events

Events under the happiness domain were subcategorized by community (2.7%), entertainment (2%), and special life events (1.3%). Events were differentiated from the activities theme by their organized nature and the lower frequency and regularity that they occurred. Some examples of events

that participants were happy about included "*going to a seafood festival with my family*" (26-year-old woman; ID 170) and "*I went to a Letterkenny show*" (36-year-old man; ID 273).

Job Prospects, Satisfaction, and Support

Employment is another important source of happiness identified by adults on the autism spectrum. Specifically, participants mentioned financial benefits (e.g., "*getting my paycheck last week*" (19-year-old woman; ID 212)), and excitement about specific job tasks (e.g., "*serving customers with delicious pizza*" (20-year-old man; ID 150)). Some participants emphasized both task-related and financial benefits as aspects that made them happy. For example, one respondent wrote:

> *Despite how stressful work is right now, I still look forward to bagging at my local grocery store amidst the current crisis [COVID-19 pandemic]. I also really enjoy buying snacks with my paycheck, and the security of knowing I can pay bills helps a ton.* (29-year-old woman; ID 222)

Moreover, participants also mentioned employment supports as a source of happiness. For example, one participant mentioned that they were happy with how their "*supported job situation has gone so far*" (36-year-old man; ID 58). Although not all participants in our sample were employed or satisfied with their current job, some participants mentioned job prospects as something that made them happy; for instance, "*getting a job interview*" (26-year-old woman; ID 266).

Everyday Sources of Unhappiness

Social Partners Eliciting Unhappiness

The social partner(s) theme was also the top source of unhappiness, including family, romantic partners, people at school/work, friends, housemates, and people in general. Having no friends was a source of unhappiness for many participants, as expressed in the following responses: "*[I] have no friends in real life (a few on Instagram), but seeing people hang out and stuff made me feel like a loser*" (24-year-old woman; ID 287); "*When I go to work and my coworkers are talking to each other effortlessly, I feel sad because I wish I could socialize at work and elsewhere, but I struggle with that a lot*" (20-year-old woman; ID 174).

Additionally, a breakup, yearning for a partner, or missing loved ones were also commonly mentioned (e.g., "*being 20 years old and not having a girlfriend*" (20-year-old man; ID 150); "*missing family*" (28-year-old woman; ID 209)). Participants also mentioned missing friends and family who have passed away. The mention of a social relationship that made a participant unhappy was typically explained by a negative interaction or event as described in the following sections.

Negative Social Interactions

Negative social interactions and lack of interactions are frequently identified as emotional tolls for autistic adults. Arguments or negative exchanges were mentioned across the different social partners, such as: "*A friend saying something hurtful to me*" (21-year-old man; ID 233), or "*My family doesn't appreciate me nor understand me so there are always arguments. I hate to argue so I have to be constantly quiet, hold my opinion on everything, and be uncomfortable and unhappy/not be myself*" (33-year-old woman; ID 151). Negative social interactions were mentioned to occur because the participant acted negatively (e.g., "*I sometimes treat my father the way my mother did*" (22-year-old woman; ID 105)), or because someone rubbed the participant the wrong way (e.g., "*This guy I liked said 'I don't like you*" (19-year-old woman; ID 280)). Furthermore, some participants reported strained interpersonal relationships due to the feeling that other people do not understand autism (e.g., "*Co-workers being somewhat ignorant of my ASD*" (27-year-old woman; ID 241)).

Current Events

Though COVID-19 had not yet been declared a worldwide pandemic at the time of the survey (March 2020), it nonetheless was a source of unhappiness for many participants given the news coverage and increasing cases. The state of US politics was also mentioned quite frequently. This was reflected in their survey responses with the assigned codes "COVID-19" and "Politics" (e.g., "*I am especially frustrated with the world's governments response to this novel virus*" (34-year-old woman; 28); "*I am currently extremely unsatisfied with the two major candidates for president*" (24-year-old woman; ID 287)).

Some participants reported being stressed about the health impacts of the virus (e.g., "*anxiety over [the] spread of coronavirus and potential threat to mother's health*" (29-year-old man; ID 78)). While few places in the United States had started taking pre-cautions with social distancing at the time of the survey, some participants were concerned with its secondary effects, such as canceled plans and disrupted employments (e.g., "*the fact I had to cancel my birthday plans this weekend at Disney due to Coronavirus*" (33-year-old woman; ID 203); "*my hours at work being cut*

due to working in the hospitality industry and the corona-virus" (22-year-old man; ID 147)). One participant shared how they felt as their future life plans were disrupted by the global outbreak of COVID-19:

> I had a job lined up to move… next month to teach English as a Second Language, but due to the coronavirus, I will be remaining where I am until hopefully November. It has been impossible to find a job where I live…so I am afraid I will go more than two years without a job. (24-year-old woman; ID 287)

Employment-related Issues Causing Distress

Navigating job applications and finding positions that may have been a good match were seen as sources of unhappi-ness for some participants (e.g., "*Inability to find a job I can comfortably perform*" (31-year-old man; ID 249)). Relat-edly, some participants specifically mentioned challenges with finding meaningful jobs that generate pleasure while still keeping the benefits and services they need (e.g., "*copi-ous amounts of work for nothing*" (21-year-old man; ID 230); "*Must make sure the job I get is low-paying, else I risk benefits… It basically means I'm relegated to being little more than a burger-flipper or janitor*" (24-year-old man; ID 71)). For those employed, job retention sometimes posed as a challenge to their mood (e.g., "*That I may lose my job due to my autism*" (23-year-old woman; ID 244)).

Additionally, the interpersonal and financial aspects of employment also made some participants unhappy. An exam-ple of negative interpersonal experiences at work included, "*a guy that was at my cash register buying items said I did not know what I was doing*" (22-year-old woman; ID 62). Lastly, financial concerns were also mentioned in relation to unhappy employment experiences in several survey responses (e.g., "*work hasn't been the best for money*" (26-year-old man; ID 89)).

Negative Emotional Experiences and Poor Mental and Physical Health

Physical and mental health problems, as well as negative emo-tional experiences (e.g., anger, annoyance, boredom), were ref-erenced as sources of unhappiness. Negative mental health and emotional experiences often were reported in relation to the previously discussed themes (e.g., social partners, employment related-issues, COVID-19, and political challenges), while physical health concerns mainly consisted of physical ailments or injuries.

The specific psychological disorders mentioned in responses were anxiety, depression, and OCD. Participants

also referenced related symptoms and general mental health concerns, for instance, "*still not finding confidence I could find a workplace that I could actually work in [without] it destroying my mental health*" (32-year-old man; ID 179); "*stressing out about coronavirus- having to determine how much of it was real vs. OCD*" (35-year-old woman; ID 143). One participant mentioned thoughts of self-harm:

> I've been crying more on how sad and boring my life is and I don't feel accomplished or fulfilled at all so I feel I want to self-harm or take everything out on myself and am too hard on myself (33-year-old woman; ID 151).

Physical illnesses mentioned were both chronic (e.g., "*having to deal with my heart condition*" (30-year-old man; ID 74)), and acute (e.g., "*the next day I caught a bad stomach bug*" (33-year-old man; ID 229)). Injuries ranged from minor (e.g., "*stubbing my toe*" (18-year-old man; ID 68)) to more serious (e.g., "*fractured ribs*" (34-year-old man; ID 139)). Some par-ticipants expressed that the source of unhappiness wasn't the illness or injury itself, but the consequences of the illness or injury (e.g., "*inability to go for a run/injury*" (28-year-old man; ID 284); "*not eating due to diabetic medication complications*" (31-year-old woman; ID 33)).

Discussion

The current study aimed to identify everyday sources of hap-piness and unhappiness reported by autistic adults, with the hope to identify potential avenues for promoting psychologi-cal health and well-being in this group. Perhaps unsurpris-ingly, the themes that arose from our sample of adults on the spectrum were consistent with commonly identified influen-tial life experiences on mood in the neurotypical population–including social relationships, interactions, and engagement in recreational and employment activities. The wide breadth of experiences that were mentioned by autistic adults underscores the need to (1) individualize treatment planning in a way that specifically considers experiences related to happiness and unhappiness, and (2) cultivate positive coping skills in the face of negative experiences.

Social experiences, including interpersonal relationships and interactions, affect mood and mental health both in neurotypi-cal and autistic populations (Demir, 2010; Pemberton & Fuller Tyszkiewicz, 2016). Responses from autistic adults in our sam-ple emphasized the importance of high-quality nurturing social relationships and interactions. While autistic adults desire close relationships (Brownlow et al., 2015), many have difficulties initiating/maintaining relationships. They also experience chal-lenges and discrimination in social and professional settings, which may contribute to the high rates of negative interactions

and downstream negative mood (Orsmond et al., 2013; Umagami et al., 2022). It is important to provide ample opportunity to learn and practice skills needed to build interpersonal relationships and foster positive interactions. It is also necessary to provide autistic adults with the tools to address conflicts and recover from unhappy moods resulting from undesirable social situations (Howlin, 2005). Furthermore, providing more community education and promoting awareness of ASD may help reduce stigma, stress, and negative interactions resulting from a misunderstanding of ASD (Stahmer et al., 2019) – especially considering that some respondents mentioned stigma surrounding ASD as a source of unhappiness.

Job satisfaction and work achievements were identified as sources of happiness by participants in our sample, which is consistent with prior literature on adults from the general population (Krause, 2014); on the other hand, employment challenges and difficulties also placed a strain on their happiness. Autistic adults have consistently reported higher rates of unemployment and underemployment, despite the ability and desire to work (Baldwin et al., 2014; Hendricks, 2010). Such employment disadvantages puts autistic adults in a vulnerable place for financial dependence and challenges (Hedley et al., 2017), possibly leading to feelings of low self-worth, dissatisfaction with social supports, loneliness, and isolation (Ee et al., 2019). Furthermore, unexpected disruptions in employment are another source of distress associated with mental health problems for autistic adults, highlighting the importance of job security (Müller et al., 2003). Two recent studies on employment changes during the COVID-19 pandemic provided direct evidence of the negative impact of a job change or loss on psychological well-being and mental health, as related to workplace satisfaction (Goldfarb et al., 2022; Taylor et al., 2022). Previous studies in this area, together with our findings, suggest that supports are needed and helpful at different stages of employment (Baldwin et al., 2014; Hedley et al., 2017; Hendricks, 2010). In sum, workplace supports can help prevent negative work-related experiences, while fostering positive experiences and mood by encouraging employment satisfaction and financial independence (Harmuth et al., 2018).

Although our study took place before the nationwide shelter-in-place mandates in the United States, participants from our sample reported unhappiness and anxiety stemming from news reports of the COVID-19 virus and potential shutdowns. While some recent studies on the early impact of the COVID-19 pandemic have reported inconsistent findings with both worsening and improving mental health surrounding the reduction of social contacts and changed routines (Adams et al., 2021; Bal et al., 2021), survey responses from the current study emphasized anxiety and unhappiness due to the uncertainties at the beginning of the COVID-19 virus spread. As co-occurring medical and psychiatric diagnoses are common with autism, it is important to consider events that may exacerbate

mental health concerns (Mannion & Leader, 2013). Besides the COVID-19 pandemic, autistic adults also identified current political events as sources of unhappiness. This highlights the need for clinical providers to consider the broader societal contexts autistic individuals live in and the potential impact current events might have on their mood and mental health.

Participants who reported a history of a depression diagnosis and participants who have never been diagnosed with depression showed similar patterns of reported everyday sources of happiness and unhappiness in general, but a couple of differences emerged. Overall, the participants with no history of depression more frequently endorsed different themes that made them happy, while also less frequently endorsing themes that made them unhappy. This overall trend reflects that participant's without a history of depression might be more "tuned in" to notice everyday experiences that create positive mood. The largest discrepancies between the two groups in the happy domain were seen through the themes of "activity" and "events." While, in the unhappy domain, participants who reported a history of depression less frequently mentioned "current events" (with the top sub-code being the COVID-19 pandemic) as something that made them unhappy. These differences across the happy and unhappy domains could result from the social withdrawal associated with depression: It is possible that participants with a history of a depression diagnosis were less likely to either attend or enjoy activities or events, as well as less likely to worry about the social isolation stemming from shelter-in-place restrictions.

The 14 themes identified in the happy domain and 22 themes identified in the unhappy domain cover a wide range of life experiences. Autistic adults mentioned a variety of activities they engaged in that elicited feelings of happiness, with many similar to the activities that have commonly been associated with positive mood outcomes in the general population— including reading, listening to music, watching television, playing video games, and partying/socializing (Chen et al., 2014). Additionally, given the number of participants in this study who named their pet as a source of happiness, spending time with pets could be encouraged as a daily stress-reduction activity (Grandin et al., 2015). Our results further emphasized the need to individualize treatment, as the range and prioritization of experiences that influence mood vary greatly across individuals. For example, Bal et al., (2022) outlines areas that may be important to consider in behavioral activation interventions to target depression for autistic individuals, including activities that promote structure, a sense of purpose and identity, a sense of control, social connectedness, and leisure. In sum, while our findings provide a starting point with common themes reported by autistic adults, adults' personal preferences for engagement with others and types of activities should be taken into careful consideration when deciding which activities to pursue.

Qualitative analyses of open responses from autistic adults allowed us to capture a wide breadth of experiences, but our study has several limitations to note. We found some participant responses lacked depth by listing experiences without providing much detail (e.g., one or two-word answers from participants). This brevity also created ambiguity for reliable qualitative coding to some degree. Future studies could incorporate different methodological approaches, such as interviews or focus groups, to promote elaborated responses. However, researchers must be cognizant of accessibility in terms of participants' communication abilities and comfort level for sharing life experiences when exploring different methodological approaches. Additionally, our question prompt, "*thinking back on the past week*," required participants to reflect on their week and report their experience retrospectively. While this allowed participants to provide the most memorable experiences that affected their mood, the responses may suffer from recall bias. It is possible that the prompted time frame may have led participants to omit reports of salient experiences that happened outside of the past week. It is also possible that the brevity of responses were due to difficulties autistic adults have recalling episodic memories (Lind & Bowler, 2010). Experience sampling methods that probe for in vivo responses could be a promising method to capture life experiences and mood changes as they happen (Larson & Csikszentmihalyi, 2014).

Our study implements the use of a community sample from a national autism research registry, thereby bypassing some of the limitations that arise through ascertained clinic samples. For example, about 50% of our sample reported life-time diagnosis of depression, which resembles the rate of self-report lifetime rate of depression in autistic individuals identified in a meta-analysis (Hudson et al., 2019), demonstrating the representativeness of our sample of autistic adults who are capable of self-report. However, we acknowledge that our findings are not entirely generalizable to the full spectrum of autism and neurodevelopmental disorders. Notably, to be able to participate in this online survey study, all participants included in the current study needed to have the cognitive and language abilities necessary to complete self-report questionnaires online. Therefore, our findings might not be generalizable to those who cannot self-report or access the internet on their own, and future researchers should attempt to evaluate sources of happiness/unhappiness for autistic individuals who are younger and older than our sample as their life circumstances are likely to be different from our sample (DePape & Lindsay, 2016; Howlin & Magiati, 2017; Ward & Webster, 2018). Additionally, we only included individuals who obtained a childhood diagnosis of autism: inclusion of individuals who obtained a diagnosis during adulthood, or individuals who have not sought out a professional diagnosis and self-identify as autistic, may yield different responses due to differing life experiences (Huang et al., 2020b; Leedham et al., 2020). Factors accounted for within

our sample may also impact results, including but not limited to gender, race/ethnicity, autism severity and symptomatology, comorbidities, employment status, income, guardianship, and living situations; these factors should be further investigated. Future studies could also include control groups, including neurotypical controls, to examine differences in emerging themes and patterns within.

The current study is unique in taking the perspectives of autistic adults to understand what they perceived as sources of happiness and unhappiness, and in the identification of common themes that shed light on the types of perceived everyday experiences that impacts mood in autistic adults. Our findings help to inform directions of future research and clinical practices focusing on daily life experiences, including relationships and interactions with social partners, engagement in activities, and employment, to improve mood in autistic adults, thus, increasing psychological wellbeing in this heterogeneous population.

Declarations

Conflict of Interest The authors declare that there is no conflict of interests.

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