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LETTER FROM THE MANAGING EDITORIAL STAFF

Dear Readers,

It is our great honour to present the tenth volume of the *Simon Fraser University Undergraduate Journal of Psychology*. This publication provides a platform for undergraduate students to share their original research, meta-analyses, and critical essays with the broader academic community, while also offering students valuable insight into the academic review and publication process.

This journal is a learning opportunity for all involved — not only for the authors, but also for the editors and reviewers who have contributed to its development. From submission to peer review to final publication, each stage of the process offers students firsthand experience with scholarly communication and collaboration.

We would like to extend our deepest gratitude to our undergraduate and graduate reviewers for their thoughtful feedback, dedication, and flexibility throughout the review process. Additionally, we would like to thank our copyediting team for their impressive attention to detail. Your contributions are essential to maintaining the high standards of this journal. We also sincerely thank the authors who submitted their work. This year, we received 34 submissions, and we are pleased to publish 10 outstanding pieces in this volume.

To our readers, thank you for your continued support and engagement. We hope you find inspiration and insight in the research presented here. We are proud of the authors whose work is showcased in this edition and grateful to the team who made this publication possible.

Sincerely,

The Managing Editorial Staff – Edition 10

ORIGINAL ARTICLES

REVIEW ARTICLES

A Closer Look at Factors Influencing Self-Esteem: Associations with Depression, Disordered Eating, and Global Self-Esteem

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Abstract

Low self-esteem is a risk factor for various psychological disorders, including depression and eating disorders (EDs). Many factors (e.g., quality of relationships, personal achievements, physical appearance) may influence an individual's global self-esteem, and these factors, as well as their relative impact on self-esteem, vary from person to person. Those with EDs tend to rely on shape and weight as the primary determinant of their self-esteem. However, there is limited research exploring self-esteem composition for those with non-eating-related psychopathology. Additionally, there is limited literature investigating the effects of basing self-esteem on factors other than shape and weight. To help fill this gap in knowledge, we recruited undergraduate students (N = 537) between the ages of 18-25 from Simon Fraser University, in Burnaby, Canada. Participants completed the SAWBS, alongside questionnaires about their mental health. Findings showed that basing a larger portion of self-esteem on intimate or romantic relationships was related to fewer symptoms of disordered eating. Basing self-esteem on competence at school and work was related to fewer symptoms of disordered eating as well as higher self-esteem. Further, basing a larger portion of self-esteem on personality, friendships, or personal development was related to better mental health. Findings from this study may be used in the development or refinement of self-esteem interventions, allowing clinicians to maximize intervention effects by providing specific areas for interventions to target.

Keywords: *self-esteem, eating disorder, depression, mental health, young adults.*

Introduction

Thoughts and feelings about self-worth are dependent on simultaneously operating factors, including but not limited to the quality of personal relationships, personal achievements, and physical appearance (Serpell et al., 2007). However, disproportionally basing self-esteem on certain factors may be detrimental to mental

health; for example, basing self-esteem largely on shape and weight is related to a higher level of disordered eating symptoms (Geller et al., 2000; 1998; 1997; Serpell et al., 2007). Additionally, preliminary research suggests that basing self-esteem on certain appearance-unrelated factors (e.g., competence at school, work, and other activities) may be related to positive mental health outcomes (Geller et al., 2002).

Global self-esteem refers to an individual's overall cognitive evaluation of themselves and their worth as a person (Orth & Robins, 2014; Shi et al., 2024). In comparison, domain-specific self-esteem refers to an evaluation of oneself in a particular area of life, such as academics or sports (Gong et al., 2023). Both global and domain-specific self-esteem can fluctuate to some degree on a short-term basis, as an individual shifts through emotional states or experiences different life events (Clasen et al., 2015; Van Doeselaar & Reitz, 2022). However, in the long term, self-esteem is a relatively stable trait over an individual's life (Orth & Robins, 2013). The factors that contribute to one's global self-esteem (i.e., physical appearance, quality of relationships) and the amount of influence each factor has varies from person to person (Fairburn, 2008). Low global self-esteem has been identified as a risk factor for various psychological disorders (Guo et al., 2022; Pelc et al., 2023; Steiger et al., 2014); further, a longitudinal study found that low global self-esteem in adolescence predicted depressive symptoms two decades later (Steiger et al., 2014). Additionally, cross-sectional research shows that low self-esteem positively correlates with frequency of binge eating, exercise to influence appearance, and ED treatment (Pelc et al, 2023). Nevertheless, there is little research on the effects of basing self-esteem on appearance-unrelated factors, or self-esteem composition in individuals with non-eating related psychopathology. Thus, the present study investigates whether basing a larger portion of self-esteem on specific factors is related to symptoms of disordered eating, depression, or global self-esteem.

Self-Esteem and Depression

Depression refers to a cluster of symptoms including sadness or irritability, incapacity to experience joy or pleasure (anhedonia), fatigue, and troubles concentrating, that lead to a significant impairment in daily functioning (American Psychiatric Association, 2022; Orth & Robins, 2013). A vast amount of literature has investigated the relationship between depression and low global self-esteem and found that the two are intimately related: low self-esteem predicts depression, and depression predicts low self-esteem (Orth & Robins, 2013). This relationship has emerged in samples of adolescents (Burwell & Shirks, 2006; Orth et al., 2014) and college students (Shi et al., 2024); longitudinally over two decades from adolescence to adulthood (Steiger et al., 2014; Steiger et al., 2015); across individuals born in the US, Mexico, and Hong Kong (Orth et al., 2014; Yang et al., 2018); and in those with severe mental illness (Shahar & Davidson, 2003). The relationship between depression and self-esteem has also been supported for domain specific self-esteem, with negative perceptions of one's own physical appearance and academic competence predicting greater depressive symptoms (Steiger et al., 2014).

Self-Esteem and Eating Disorders

EDs are a group of psychological disorders that involve significant and persistent disturbances in eating and weight control behaviours that lead to an impairment in daily functioning, both physically and mentally (American Psychiatric Association, 2022). The cognitive behavioural model of eating disorders (CBT-ED) proposes that all eating pathologies share one core mechanism: an overvaluation of shape and weight (Trompeter et al., 2021). In other words, the self-esteem of an individual with an ED is largely determined by their current body weight and shape. Although different EDs are characterized by distinctive behaviours, all of these behaviours are underpinned by the same cognitive distortion. This overvaluation of shape and weight maintains disordered eating over time (Dalle Grave, 2010).

It is well established in psychological research that low self-esteem and ED symptoms predict one another reciprocally (Colmsee et al.,

2021; Krauss et al., 2023; Pelc et al., 2023). Furthermore, research investigating the specific mechanisms contributing to the low levels of self-esteem found in individuals with EDs provides support for the CBT-ED model. Some of this research uses the SAWBS, which measures the extent to which shape and weight contribute to one's feelings of self-worth (Geller et al., 1997; Serpell et al., 2007). To complete this inventory, participants (1) choose from a list of personal attributes that contribute to their self-esteem (e.g. their competence at school/work, the quality of their friendships, their body weight), (2) rank order the chosen attributes from most to least influential on their opinion of themselves, and (3) divide a pie chart into sections, with the size of each pie slice representing the significance of one attribute to their overall self-esteem (Serpell et al., 2007). The SAWBS score refers to the angle of the pie slice representing shape and weight, measured in degrees (Geller et al., 1997). It is theorized that the SAWBS pie chart of a healthy individual contains many small pie pieces, meaning that many different factors contribute to their self-esteem (Fairburn, 2008). Thus, if any one factor is negatively affected it has a relatively small impact on their global self-esteem level.

However, individuals with EDs tend to have a disproportionately large pie slice dedicated to weight and shape; thus, if an individual with an ED is not happy with their current weight and shape, it will have a large impact on their global self-esteem (Geller et al., 2000; 1998; 1997; Serpell et al., 2007). One study found the average SAWBS score in a sample of women with EDs was 145 degrees, compared to 60 degrees in the control group (Geller et al., 1997). This in turn limits the area of the pie that other factors can occupy (i.e., other slices are smaller in size, and there may be fewer of them) (Fairburn, 2008). The large SAWBS scores found in individuals with eating disorders corroborates the overvaluation of weight and shape posited in the CBT-ED model and may explain the common occurrence of low self-esteem in individuals with EDs.

Given that the SAWBS was developed specifically for research on EDs, there is limited research exploring the factors that contribute to self-esteem in individuals with other psychological disorders. Cambron and colleagues (2008) provide preliminary research suggesting that basing self-esteem on interpersonal relationships is a risk factor for depression in women, but not men. However, contrasting this, Woodward and colleagues (2014) found that depressed women tended to undervalue interpersonal relationships. They also found that depressed women overvalued outward appearance and undervalued being a good person. These contrasting findings may be due to sample differences between the studies, or the difference in direction of the relationship analyzed (i.e. depression vs. self-esteem as the risk factor). It may be the case that both findings are true at different times: individuals who overvalue personal relationships may be at risk of developing depression if the quality of their relationships does not meet their standards in the area. This is supported with research showing that poor relationship quality predicts a higher risk of depression 10 years later (Teo et al., 2013). In later stages, depressed individuals may compensate by decreasing the importance they put on personal relationships to determine their self-esteem, given their failure to 'succeed' in this area. This would explain Woodward et al.'s (2014) finding. However, this explanation is purely speculative; no further studies have been done to clarify these contrasting results. Regardless, these studies both do suggest that the factors influencing one's self-esteem may play an important role in non-eating-related psychopathology as well as EDs.

Although there has been much research on the weight and shape component of self-esteem, our knowledge of the holistic composition of a SAWBS pie chart, both in healthy and clinical populations, is limited. Some research by Woodward et al. (2014) and Geller et al. (2002) suggests that factors other than shape and weight may be related to ED symptoms. Woodward and colleagues (2014) found that women with EDs significantly undervalued intelligence, academic performance, and their personality. Further, in a cross-sectional sample of female high school students, Geller and colleagues (2002) found that having a larger SAWBS pie slice dedicated to competence at school and other activities was related to lower ED symptomatology. They also found that having a larger SAWBS pie slice dedicated to intimate relationships was related to greater ED

symptomatology and lower self-esteem (body and global); however, these findings are yet to be replicated. Thus, exploring the role of self-esteem composition in psychological disorders other than EDs, as well as investigating all components of the SAWBS rather than focusing solely on shape and weight, could improve our understanding of the foundations of low self-esteem and refine clinicians' ability to prevent or improve it.

Current Study

The present study seeks to address these gaps by exploring the relationship between various factors influencing self-esteem and mental health. More specifically, this study investigates whether variations in the influence of the seven appearance-unrelated SAWBS factors[1] (intimate or romantic relationships, competence at school/work, personality, friendships, personal development, competence at activities other than school/work, and other) on self-esteem are associated with variations in depression, ED symptoms, or global self-esteem levels. Based on preliminary findings in the literature, our hypotheses were as follows:

(1) Basing a larger portion of self-esteem on intimate or romantic relationships will be related to greater symptoms of depression and disordered eating, and lower global self-esteem.
(2) Basing a larger portion of self-esteem on competence at school, work, and other activities will be related to fewer symptoms of depression and disordered eating, and higher global self-esteem.

Methods

Participants

Participants were undergraduate students recruited through Simon Fraser University's (SFU) Research Participation System (RPS) between September 2023 and December 2024. Participants received course credit in compensation for their time. Students were excluded from participation if they were older than 25 or younger than 18, as the study aims to investigate factors contributing to self-esteem specifically in young adults. Young adults were chosen as the population of interest due to the high rates of psychopathology in this age group (Jurewicz, 2015; National Institute of Mental Health, 2024). Additionally, participation was not possible for individuals who did not have access to a laptop or desktop computer and a stable internet connection, as the study took place online and the final portion of the questionnaire was not compatible with a smartphone.

The final sample consisted of 537 participants. A power analysis was conducted using GPower, confirming that this sample size provided more than sufficient power to detect an effect with the planned analyses. Participants ranged from 18-25 years of age (M = 19.2, SD = 1.5). The sample was female-dominated, with 63.5% (n = 341) of participants self-identifying as women, and 35.9% (n = 193) as men. Most participants identified as Asian (South, East, or Southeast; 55.7%, n = 299), White (26.8%, n = 144), Middle Eastern (5.2%, n = 28), or multiracial (5.2%, n = 28). Detailed demographic characteristics of the sample are summarized in Table 1.

[1.] The SAWBS contains 11 factors total. Only seven were chosen for investigation in the current study because they are the only appearance-unrelated factors in the SAWBS. The remaining four appearance-related factors are shape, weight, face, and muscularity.

Table 1. *Participant Demographics*

Characteristic		*n*	%
Gender Identity			
	Woman	341	63.5
	Man	193	35.9
	Nonbinary, Agender, or Genderqueer	2	0.4
	Did not report	1	0.2
Race/Ethnicity			
	Asian	299	55.7
	White	144	26.8
	Multiracial	28	5.2
	Middle Eastern	28	5.2
	Hispanic/Latin American	15	2.8
	Black	7	1.3
	First Peoples/Indigenous	5	0.9
	Other	10	1.9
Sexual Orientation			
	Straight	399	74.3
	Bisexual or Pansexual	67	12.4
	Questioning or Unsure	25	4.7
	Gay or Lesbian	16	3.0
	Asexual	13	2.4
	Queer	8	1.5
	Prefer not to answer or did not respond	7	1.3
Yearly Household Income			
	Unemployed or Disabled	21	3.9
	Under $10,000	36	6.7
	$10,000-30,000	44	8.2
	$31,000-50,000	23	4.3
	$51,000-75,000	27	5.0
	$76,000-100,000	52	9.7
	$101,000-200,000	82	15.3
	Over $200,000	31	5.8
	Don’t know, prefer not to answer, or did not respond	221	41.1

Procedures

The present study was approved by the SFU research ethics board. The study was advertised on SFU’s RPS as a survey about self-esteem, mental health, and eating and exercise behaviours. Participants completed the survey online. When a student signed up for the study, they were given a five-digit participant number (SONA ID) and were instructed to follow a link to a survey in Qualtrics.

After completing an informed consent form, participants completed a demographics questionnaire followed by a series of validated questionnaires in Qualtrics inquiring about their mental health, eating behaviours, and thoughts and feelings about their body.

The current study is part of a larger study investigating the psychometric properties of the SAWBS – Online Version; thus, participants also filled out further questionnaires that were not included in analyses for the present study. Upon completion of the questionnaires, participants were instructed to follow a link to an external website where they filled out one additional interactive measure: The SAWBS-Online (Geller et al., 1997; White et al., 2025).

Finally, participants were given a debriefing form, which included relevant mental health resources.

Materials

Demographics Questionnaire

All participants completed a demographics questionnaire, which collected information about their age, gender identity, sexual orientation, race/ethnicity, country of origin, household income, relationship status, height, weight, and mental health diagnoses. Most questions used multiple choice type responses, with options to choose 'other' or type in a customized response where relevant. Questions about participants' country of origin, height, and weight had open text box responses. All questions had a 'prefer not to answer' option, except for age, to ensure that all participants met inclusion criteria (i.e., were 18-25 years old).

Shape and Weight Based Self-Esteem Inventory

The SAWBS (Geller et al., 1997) is an interactive measure of self-esteem. It was originally developed as a paper-and-pen measure, but the present study used an online adaptation, developed by White and Zaitsoff (forthcoming) to allow participants to take part in the study remotely. The SAWBS measures the extent to which various factors contribute to an individual's global self-esteem level. These factors were chosen based on previous self-esteem measures identifying main dimensions of self-esteem and feedback from female graduate students on the relevance of factors to their own self-esteem (Geller et al., 1997). The output of the SAWBS takes the form of a pie chart, with each pie slice representing a personal attribute that is important to how a participant has felt about themselves in the past four weeks (e.g., competence at school/work, quality of friendships, body weight). In prior research using the SAWBS, the primary outcome of interest has been the SAWBS score: the angle of the pie slice dedicated to shape and weight (e.g., Geller et al., 2000; 1998; 1997; Serpell et al., 2007). However, the current study did not have one specific SAWBS factor that is of primary interest; instead, the study looked at the percentage of the SAWBS pie chart that each appearance-unrelated factor took up. The SAWBS has demonstrated strong psychometric properties in samples of Canadian adults with and without eating disorders (Geller et al., 1997; 1998), female high school students (Geller et al., 2000), and in adolescent British girls (Serpell et al., 2007). However, in each of these studies the SAWBS score was the primary variable of interest. The psychometric properties of the SAWBS as it is used in the current study are yet to be investigated.

Center for Epidemiologic Studies Depression Scale

The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) is a 20-item self-report questionnaire to assess symptoms of depression in the general population. Participants respond to items on a 4-point Likert-type scale (1 = "Rarely or none of the time, less than 1 day," 2 = "Some or a little of the time, 1-2 days," 3 = "Occasionally or a moderate amount of the time, 3-4 days," 4 = "Most or all of the time, 5-7 days") about how often they have felt a certain way during the past week (e.g., I was happy). The CES-D is one of the most commonly used screening instruments for depression and has well-established psychometric properties. The CES-D has demonstrated good reliability and validity in both clinical and non-clinical samples, and cross-culturally (Fountoulakis et al., 2001; Radloff, 1977; Ruiz-Grosso et al., 2012; Shafer, 2005). In the present study, the CES-D demonstrated excellent internal consistency (α = .914).

Eating Disorder Examination Questionnaire

The Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994) is a widely used 28-item self-report measure of eating disorder symptomatology adapted from the Eating Disorder Examination (Cooper & Fairburn, 1987; Fairburn & Cooper, 1993). Participants are asked about their eating behaviours and body image concerns over the past four weeks (e.g., "Have you felt fat?"; "Have you gone for long periods of time without eating anything in order to influence your shape or weight?"). Question response types include 7-point Likert-type scales and numerical response text boxes to specify frequency of behaviours where relevant (e.g., "How many times have you eaten what other people would regard as an

unusually large amount of food?"). The psychometric properties of the EDE-Q have been thoroughly investigated, and it has been deemed a reliable and valid measure for the assessment of ED symptoms (Aardoom et al., 2012; Berg et al., 2012). In the present study, the EDE-Q demonstrated excellent internal consistency (α = .955).

Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is a 10-item measure of self-esteem. Each item consists of a statement to which participants indicate their agreement on a 4-point Likert-type scale (1 = "Strongly Agree," 2 = "Agree," 3 = "Disagree," 4 = "Strongly Disagree"). Five items are positively worded (e.g., "On the whole, I am satisfied with myself"), and five are negatively worded (e.g., "I feel I do not have much to be proud of"). The RSES is a widely recognized measure of self-esteem, and the psychometric properties are well established. The RSES has demonstrated high levels of reliability and validity across diverse samples, including community samples across Canada and the United States, a clinical sample diagnosed with anxiety and/or depression from Buenos Aires, and adults diagnosed with schizophrenia in Indonesia (Gongora & Casullo, 2009; Monteiro et al., 2021; Muslih & Chung, 2024; Ruddell, 2020; Sinclair et al., 2010). In the present study, the RSES demonstrated good internal consistency (α = .869).

Data Analysis

Data Cleaning

After data collection was complete, survey responses were screened to ensure eligibility requirements were met. Responses were omitted from the final analyses if: 1) a SONA ID was not provided, 2) the participant's age was not provided, or their age was less than 18 or more than 25, 3) the participant did not reach the end of the Qualtrics survey, 4) the SAWBS was not completed, or 5) the response had the same SONA ID as another response in the dataset (in this case the participant's first full completion of the survey was retained, and all other responses were removed). 537 responses met eligibility requirements and were retained in the final analyses.

Prior to running analyses, descriptive statistics of all study variables were examined to ensure values were within range, and that means and standard deviations were plausible. The dataset was then screened for missing data, as well as multivariate outliers. Little's Missing Completely at Random test demonstrated that data was indeed missing completely at random X2 (74) = 74.80, p = .45. Thus, pairwise deletion was used to handle missing data. Multivariate outliers were identified using Mahalanobis distances. Nine outliers were identified. However, given that the scores of all outliers fell within a plausible range for all measures, there was no further evidence that these scores were not valid; thus, all outliers were retained in the dataset.

Assumptions and Assumption Checking

Data was analyzed using multiple linear regression. The assumptions for linear regression analyses include: 1) independence of observations, 2) linearity of mean, 3) homoscedasticity, and 4) normality. Assumptions one through three were checked using residual plots and assumption four with Q-Q plots. The dataset satisfied all assumptions.

Results

Descriptive Statistics

Descriptive information about participant's self-esteem pie charts is depicted in Table 2. Participants endorsed between 1-10 factors, with a mean of 7.42 factors. The most often endorsed SAWBS factor was 'competence at school/work', with 90.3% of participants including this factor in their pie. The least endorsed SAWBS factor was 'other', where participants entered their own SAWBS factor in an open response text box. Only 5 participants (0.9%) endorsed this factor. Participant mental health demographics are depicted in Table 3.

Table 2. *Self-Esteem Determinants Using the SAWBS*

SAWBS Factor	Endorsed Piece		Size of Slice[a]	
	n	%	M	SD
Competence (school/work)	485	90.3	21.4%	15.9
Friendships	462	86.0	13.0%	9.6
Personality	461	85.8	13.2%	9.3
Face	428	79.7	11.6%	8.6
Personal Development	403	75.0	13.1%	10.6
Shape	396	73.7	12.2%	9.0
Competence (not school/work)	382	71.1	9.2%	7.1
Weight	337	62.8	12.5%	12.2
Relationships (intimate or romantic)	366	68.3	16.4%	12.9
Muscularity	263	49.0	8.7%	8.5
Other	5	0.9	32.2%	27.8

[a] Average size of the SAWBS slice for those who endorsed this factor on their pie.

Table 3. *Mental Health Demographics*

Construct	Diagnosis (past or present)		Measure	Possible Range	Score	
	n	%			M	SD
Depression	112	20.9	CES-D	0-60	22.0	11.7
Eating Disorder	103	18.7	EDE-Q	0-132	39.6	30.8
Self-Esteem	N/A	N/A	RSES	0-30	14.7	6.1

Hypothesis Testing

Multiple linear regression analyses were used to examine hypotheses. Predictor variables were the seven appearance-unrelated SAWBS factors selected by participants when creating their self-esteem pie charts: intimate or romantic relationships, competence at school/work, personality, friendships, personal development, competence at activities other than school/work, and other (open text box response). These are continuous variables, representing the percentage of each participant's pie chart occupied by the specified factor. Dependent variables were CES-D scores, EDE-Q scores, and RSES scores, respectively. An alpha level of 0.05 was used to determine significance. Results are presented in Table 4.

Depression

The SAWBS factor of personality was predictive of scores on the Center for Epidemiologic Studies Depression Scale (CES-D), with larger slices predicting lower levels of depressive symptoms. The remaining six SAWBS factors did not demonstrate significant relationships with depression ($p > .05$).

Disordered Eating

The SAWBS factors of competence at school/work, personality, friendships, personal development, intimate/romantic relationships, and competence at activities other than school/work were predictive of scores on the Eating Disorder Examination Questionnaire (EDE-Q), with larger SAWBS slices predicting lower levels of disordered eating. The SAWBS factor of 'other' did not demonstrate a significant relationship with disordered eating ($p > .05$).

Table 4. *Multiple Linear Regression Output*

Scale	SAWBS Factor	β	SE	*t*	*p*
Depression (CES-D)					
	Competence (school/work)	-.062	.034	-1.802	.072
	Personality	**-.139**	**.057**	**-2.443**	**.015**
	Friendships	.034	.054	.643	.520
	Personal Development	-.041	.052	-.790	.429
	Relationships (intimate or romantic)	-.037	.042	-.874	.383
	Competence (not school/work)	-.105	.070	-1.498	.135
	Other	-.078	.143	-.542	.588
Eating Disorders (EDE-Q)					
	Competence (school/work)	**-.448**	**.088**	**-5.102**	**<.001**
	Personality	**-.495**	**.143**	**-3.459**	**<.001**
	Friendships	**-.335**	**.139**	**-2.415**	**.016**
	Personal Development	**-.449**	**.129**	**-3.489**	**<.001**
	Relationships (intimate or romantic)	**-.362**	**.110**	**-3.295**	**.001**
	Competence (not school/work)	**-.422**	**.180**	**-2.339**	**.020**
	Other	-.490	.329	-1.492	.136
Self-Esteem (RSES)					
	Competence (school/work)	**.037**	**.018**	**2.062**	**.040**
	Personality	.040	.030	1.365	.173
	Friendships	.045	.028	1.594	.112
	Personal Development	.010	.027	0.376	.707
	Relationships (intimate or romantic)	-.013	.022	-.605	.545
	Competence (not school/work)	.025	.037	.685	.493
	Other	-.017	.068	-.248	.805

Note: Bold text indicates statistical significance at the α = 0.05 level. CES-D = Center for Epidemiological Studies Depression Scale, EDE-Q = Eating Disorder Examination Questionnaire, RSES = Rosenberg Self-Esteem Scale.

Global Self-Esteem

The SAWBS factors of competence at school/work was predictive of scores on the Rosenberg Self-Esteem Scale (RSES), with larger slices predicting higher global self-esteem. The remaining six SAWBS factors did not demonstrate significant relationships with self-esteem levels ($p > .05$).

Discussion

Prior research using the SAWBS demonstrates a clear relationship between basing self-esteem disproportionally on shape and weight and the development and maintenance of disordered eating (Geller et al., 2000; 1998; 1997; Serpell et al., 2007). However, limited research has investigated (1) the potential protective nature of basing self-esteem on appearance-unrelated factors, or (2) SAWBS composition in individuals with non-eating-related psychopathology. Furthering our understanding of the mechanisms contributing to global self-esteem levels is essential in refining our ability to prevent or improve low self-esteem. Thus, in the present study, we investigated the relationship between appearance-unrelated factors' influence on self-esteem and levels of depression, disordered

eating, and global self-esteem in a sample of undergraduate students.

Contrary to hypothesis one, findings showed that basing a larger portion of one's self-esteem on intimate or romantic relationships was related to fewer symptoms of disordered eating. Additionally, the proportion of self-esteem dedicated to intimate or romantic relationships was not significantly related to depression or global self-esteem levels. This contrasts findings from Geller and colleagues (2002), who found that basing self-esteem on intimate relationships was related to poorer mental health in adolescent girls. However, the participants in the current study are notably older (18-25 years) than those in Geller's study (13-18 years). Adolescents and adults may have drastically different ideas of, and experiences in, intimate/romantic relationships, leading to a differential effect of basing self-esteem on the same factor in each age group. Intimate relationships in adolescents have been found to act as a sort of 'training ground' for future relationships (Norona et al., 2015). These relationships are typically shorter in duration, less exclusive, less intimate (both emotionally and sexually), and provide less support than adult relationships (Furman & Buhrmester, 1992; Meier & Allen, 2009). In fact, most adolescent intimate relationships do not satisfy the requirements for an attachment relationship (Rubin et al., 2011), contrasting those in young adulthood and beyond. Given these important distinctions, it is plausible that basing a larger portion of self-esteem on intimate relationships is detrimental in one's adolescent years but not in young adulthood. This extends prior research in two ways: first, by suggesting that basing self-esteem on intimate/romantic relationships may be protective against disordered eating symptoms in university students, and second, by suggesting that a 'healthy' self-esteem pie chart may look different in different age groups. Taken further, this suggests that interventions targeting self-esteem composition should be developed and implemented with consideration of the participant's age.

Interestingly, results also showed that basing a larger portion of self-esteem on friendships (the only other relationship-based SAWBS factor), though not included in the hypotheses, was significantly predictive of fewer ED symptoms. This suggests that regardless of the actual quality of one's friendships, having a self-esteem that is largely determined by the quality of one's friendships is related to better mental health. Perhaps basing self-esteem on friendships leads individuals to put more effort into developing and maintaining those relationships, thus resulting in a better-quality support network, acting protectively against ED symptoms. This finding also contradicts Geller and colleagues (2002) who found no significant relationship between basing self-esteem on friendships and ED symptoms. This may too be reflective of the different roles that relationships play in these two age groups. Like romantic relationships, friendships look different in adolescence versus adulthood. In childhood and adolescence, friendships are often based around shared activities and interests. However, in the transition from adolescence to adulthood, friendships begin to revolve around mutual trust, and fulfillment of emotional needs such as support, security, and intimacy (Blieszner & Roberto, 2004). Thus, this suggests that basing self-esteem on friendships plays a protective role only during stages of life when friendships provide a deeper level of reliable support. Future research should further explore differential effects of SAWBS factors across the lifespan.

Further, basing a larger portion of self-esteem on competence at school/work was related to fewer symptoms of disordered eating and higher self-esteem, and basing a larger portion of self-esteem on competence at other activities was related to fewer symptoms of disordered eating. These findings lend partial support to our secondary hypothesis and corroborates Woodward and colleagues' (2014) finding that undergraduate women with disordered eating symptoms tended to undervalue their academic performance. However, it is important to note that sample demographics may play a role in these findings. Both Woodward and colleagues (2014) and the present study used a sample comprised of students who had been successful in their application to a university, and thus who are at least somewhat competent at school. This may contribute to the positive relationship found between basing self-esteem on competence at school and mental health. Interestingly, there was no significant relationship found between

basing self-esteem on competence and levels of depression. Perhaps basing self-esteem on competence is protective against certain disorders, but not others. Further research would be beneficial to explore these differential relationships and determine if basing self-esteem on competence is protective against other forms of non-eating-related psychopathology, or if this relationship is unique to eating disorders.

Two additional factors that were not included in the hypotheses for the present study emerged as predictors of better mental health. First, basing a larger portion of self-esteem on personality was related to fewer symptoms of disordered eating and depression. This finding is in line with Woodward and colleagues (2014) who found that female undergraduate students with disordered eating symptoms tended to undervalue their personality (e.g., their SAWBS pie had only a small slice dedicated to personality, or personality was absent from the pie). Second, basing self-esteem on personal development (i.e., sense of morality, ethics, or spirituality) was related to fewer symptoms of disordered eating. This SAWBS factor has not emerged as a predictor of mental health in prior research, perhaps simply due to the lack of research investigating this relationship.

Taking these findings altogether, it may be the case that basing self-esteem on factors individuals have volitional control over is more desirable than basing self-esteem on unchangeable factors. Prior research has shown that basing self-esteem on appearance-related factors (e.g. weight, shape, face, muscularity) is related to poorer mental health (Geller et al., 2002; 2000; 1998; 1997; Serpell et al., 2007), and these factors are largely determined by genetic influences that are out of our control. However, in the current study we found that basing self-esteem on six different appearance-unrelated factors was related to better mental health. These factors are all somewhat influenceable by our volitional choices (e.g., practice or rehearsal can increase competence, intentional effort can improve relationship quality). This hypothesis is consistent with prior research showing that a high sense of control is related to positive psychological outcomes, and an impairment of control is associated with poorer mental health (Davis & Burrow, 2024; He et al., 2024; Keeton et al., 2008). However, further research should be carried out to assess the accuracy of this explanation.

Strengths, Limitations, and Future Directions

A strength of the present study was the ethnic composition of the sample, with most participants identifying as Asian (South, East, or Southeast; 55.7%) and a minority as white (26.8%). This deviates from the norm in psychological research, where white individuals are typically vastly overrepresented (Roberts & Mortenson, 2022). However, there are also limitations to the study and the generalizability of results. First, the sample consisted of only undergraduate psychology students, who are not representative of the entire population of young adults in Canada. Most participants were female (63.5%), and all were more educated than the average 18–25-year-old, given their university student status. Thus, it would be beneficial to replicate the study with a non-university sample to substantiate findings. Secondly, data was collected via self-report which introduces the risk of response bias. Participants may not have answered questionnaires entirely honestly or accurately, especially given the personal nature of many of the questions. It would be beneficial to run a study in which participants receive formal diagnostic interviews to confirm their diagnoses or lack thereof, to ensure accurate diagnostic categorization and symptom profiles. Third, the study has a cross-sectional design, meaning causal attributions cannot be made. Further insights about how SAWBS composition and mental health influence one another could be gained by running longitudinal studies in this area. A further valuable extension of this research, with more direct clinical implications, could be investigating the effects of a self-esteem intervention on SAWBS pie chart composition and global self-esteem. Finally, the present study uses the SAWBS scale in a manner that has not yet been psychometrically validated. Previous psychometric studies on the SAWBS have investigated its use as a measure to assess the importance of specifically shape and weight in determining one's global self-esteem (Geller et al., 1997; 1998; 2000; Serpell et al., 2007).

However, the present study uses the SAWBS to assess the importance of seven appearance-unrelated factors in determining self-esteem. Additionally, this study uses an online format for the SAWBS (White et al., 2025), rather than the original paper and pen version. The psychometric properties of the SAWBS when utilized in this manner should be investigated in future research.

Implications

The results of the present study have important clinical implications, specifically for interventions targeting global self-esteem. Insights gained may aid in the development or refinement of self-esteem interventions, with the goal of increasing a patient's dependence on SAWBS factors associated with lower levels of mental health symptomatology. This technique is already a common practice within the cognitive behavioural treatment of eating disorders; clinicians guide their patients through the creation of a self-esteem pie chart and discuss the potential implications of the chart's composition (Fairburn, 2008). Often, this includes recognition of the patient's overvaluation of weight and shape, which is associated with ED symptomatology (Geller et al., 2000; 1998; 1997; Serpell et al., 2007). From here, patients work to decrease their dependence on weight and shape to determine their self-esteem by decreasing behaviours such as shape checking and frequent weighing, as well as increasing their dependence on other factors by engaging in new activities (Fairburn, 2008). The goal is to help patients develop a self-esteem pie chart that more closely resembles a healthy individual. The present study contributes to the evidence base for this treatment, suggesting that basing self-esteem on appearance-unrelated factors is related to better mental health outcomes. Additionally, results suggest that helping patients increase dependence on certain non-appearance-related factors may be more beneficial than others, depending on what the intervention is targeting. For instance, it may yield more desirable results to focus on increasing reliance on personality for those with depressive symptoms, but on competence at school/work for those with low global self-esteem. However, longitudinal research should be carried out to confirm a causal relationship between these variables before therapies are altered or implemented.

If a causal relationship is indeed found, the information learned about factors influencing self-esteem and mental health could be further used to inform the development of preventative interventions. Programming that teaches strategies to develop a 'healthy' self-esteem pie chart and increase reliance on the three areas that emerged as predictive of better mental health could be disseminated to individuals at a young age in the hopes of increasing children/adolescents' resilience and decreasing the development of psychopathology in the population.

In summary, the present study extends research by suggesting that appearance-unrelated factors are relevant to the treatment of eating disorders, and that the factors we base self-esteem on may be relevant to non-eating-related disorders, such as depression. These findings highlight important areas for future research to expand on, perhaps eventually leading to the development of new interventions to increase global self-esteem levels in individuals with a diverse array of mental health concerns.

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Issues With Media Consumption: The Impact of #whatIeatinaday Content on Disordered Eating Behaviours

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Abstract

Social media posts about everything a person has eaten in a day, called #whatIeatinaday videos, can lead to an increase in disordered eating behaviours. Disordered eating behaviours are behaviours that show an unhealthy relationship with food, such as excessive food restriction, anxiety related to specific foods, excessive dieting, and purging. However, it is possible that #whatIeatinaday videos could also help people in recovery from an eating disorder. A variety of studies, including surveys, interviews, and experimental designs, will be used to investigate the common themes in #whatIeatinaday videos, including misinformation and moralising food. This article examines the impact that social media, including #whatIeatinaday videos, has on disordered eating behaviours and body image. This review will investigate both the negative impact of #whatIeatinaday on disordered eating and the positive effects of social media on recovery. The present study ends by suggesting that #whatIeatinaday videos can be used to help people in recovery, but only if they are used carefully.

Keywords: *eating disorders, social media, #whatIeatinaday.*

Introduction

Social media posts about everything a person has eaten in a day, called #whatIeatinaday videos, can lead to an increase in disordered eating behaviours in people who watch them (Davey et al., 2024). This paper will investigate both the positive and negative consequences of engaging with this style of content. Disordered eating behaviours are behaviours that show an unhealthy relationship with food, such as excessive food restriction, anxiety related to specific foods, excessive dieting, and purging (Lee et al. 2025). Studies have found that social media use can increase disordered eating behaviours (Santarossa & Woodruff, 2017). Despite the problems associated with social media, it is possible that these posts could help people in recovery. Some research has found that online support can help people who are recovering from an eating disorder (Eichhorn, 2008). Social media is a part of our everyday lives, so it is important to investigate the impact of social media on mental health, including disordered eating behaviours.

Moralization

When people talk about what they eat, they are communicating a set of values, which can be perceived as morally right or wrong. This process is called moralisation. For example, when people talk about eating salad, they might talk about the importance of health and when they talk about eating sweets, they might talk about the importance of limiting one's sugar intake. These moral standards are based on both obligations towards other people and what is desirable.

When consuming food has morality attached to it, people are more likely to feel a sense of shame about their consumption (Sandal, 2018). Feeling shame about eating often results in disordered eating behaviours (Goss et al, 2009).

Additionally, food is socially and culturally classified as clean or unclean. For example, some people attach a moral meaning to consuming meat, locally grown foods, or "natural" foods. Media is used to reinforce these values; many #whatIeatinaday videos reinforce ideas that food is moral or immoral (Sandal, 2018).

Content creators are people who post on social media regularly with the intention of reaching a large audience. When content creators talk about how they are being healthy or good, it reinforces the idea that there are ways to eat that are immoral or bad. This moralisation could place added pressure on individuals because if restriction is moral, the lack of restriction is immoral.

Moralisation may add to the stress of eating since it is no longer just about being a healthy person; it is about being a good person. Moralisation of food consumption might also result in judging people more harshly for their eating choices, which could lead to more social isolation.

Furthermore, the amateur nature of these vlogging videos creates a sense of authenticity (Sandal, 2018). This sense of authenticity and interactive aspect increases the connection the viewer feels with the content creator. If the viewer trusts the content creator more, they are more likely to take their advice seriously and try to emulate their behaviour (Sandal, 2018).

Misinformation

A recent study looking into misinformation in #whatIeatinaday videos found many videos include information that is false or presented in a misleading way (Topham et al., 2023). The study focused on #whatIeatinaday videos on YouTube. The researchers looked at recurring themes and underlying messages present in the videos, paying particular attention to health advice.

According to their data, these videos do not usually involve the creator telling the viewer what to eat. Instead, the creator will talk about why they make the food choices they do and how it relates to their understanding of health. Videos on the internet are often used as a framework for how people should view their body and health (Topham et al., 2023). Content creators often tell their audiences that they are not experts, all bodies are different, and they are just saying what works for them (Topham et al., 2023).

The researchers also found that creators would use scientific-sounding language, but it was often meaningless or misleading. For example, content creators frequently talk about chemicals or all-natural foods; however, they use these terms incorrectly. Content creators frequently suggest scientifically disproven treatments, such as detoxing.

These videos often present a problem and a diet to solve it. The content creators often claim that any problem can be solved with a diet. Content creators often use words like "light" and "airy" to describe how they feel on their diets. They mention benefits such as mental clarity or feeling light (Topham et al., 2023).

Spreading misinformation about diets or certain foods may result in an increase in disordered eating behaviours because many diets are quite restrictive. Viewers are probably more likely to follow a diet when they believe it will solve a problem. Since content creators often claim that unnecessary restriction and unhealthy diets make them feel "light" and "airy" (Topham et al., 2023), viewers might be motivated to engage in these behaviours to achieve the desired effect. If people believe that some foods are toxic and should never be eaten, this could lead to restriction.

The Impact of #whatIeatinadayvideos

Being exposed to what #whatIeatinaday can promote disordered eating behaviours, as shown in a study where participants were exposed to hashtags with different styles of content. Participants were exposed to one of the following hashtags: #whatIeatinaday, #cleaneating, or the control condition, #nature (Davey et al., 2024).

The participants then had to fill out the Eating Disorder Examination Questionnaire (EDE-Q)—8-item version, which assesses disordered eating behaviour, and the Body Image States Scale (BISS), which assesses how people feel about their bodies before and after watching the content (Davey et al., 2024). The EDE-Q uses a Likert scale to assess Restraint, Eating Concern, Shape Concern and Weight Concern. A lower mean score indicates increased disordered eating behaviour. The BISS uses a Likert scale to assess individuals' experiences related to their physical appearance. A higher score indicates that the individual has a more favourable body image.

The researchers found that even short-term exposure to the hashtags #whatIeatinaday and #cleaneating resulted in a reduction in EDE-Q scores, which in this study meant there was an adverse effect. The BISS scores did not change, which suggests that viewing the hashtags did not have an adverse effect on body satisfaction.

The impact of looking at this type of content was worse for younger women, possibly because of societal pressure (Davey et al., 2024). Younger women face significant pressure from society to be slim, which can impact their behaviour and body image. Younger women might also be less able to identify misinformation and might be more easily influenced than older women because they have less life experience.

Davey and colleagues suggested that repeated exposure to these hashtags could create a cumulative effect on disordered eating behaviours. The more someone watches this style of content, the worse the effect will be.

There are possible problems associated with specific styles of content. For example, content tagged as “clean eating” would probably focus on health, and the diet followed in these videos would likely be presented as healthy. Both #whatIeatinaday and #cleaneating videos could present the diets shown as healthy and desirable, even if they are too restrictive.

Even if the diet shown isn’t healthy, watching videos that show restrictive eating could both idealise and normalise restrictive behaviour. Watching #whatIeatinaday video can be dangerous, since they encourage the viewer to engage in disordered eating behaviours.

The content included in #whatIeatinaday videos matters. A recent study investigated the impact of low-calorie vs high-calorie diets portrayed in #whatIeatinaday videos (Drivas et al., 2024). The participants were shown five TikTok videos. One of these videos was either a “low-calorie” video or a “high-calorie” video. A test pilot group categorized the videos as high-calorie or low-calorie based on whether they believed the diet would result in weight gain or weight loss (Drivas et al., 2024). In “low-calorie” videos, the creators were often thin and talked about how the foods adhered to a particular diet. The “high-calorie” videos often included a calorie counter or were tagged as unhealthy by the creator.

The participants' reactions to the videos were measured using a variety of assessment tools. Intent to diet was measured using the Dieting Intentions Scale (DIS), body dissatisfaction was measured on the visual analog scales (VAS), social comparison was measured based on the Tiggemann and McGill (2004) State Appearance Comparison Scale, and mood was rated using the Positive and Negative Affect Scale, extended version (PANAS-X). Watching high-calorie #whatIeatinaday videos was correlated with a positive effect on body image, increased mood, increased downward social comparison, and increased intention to diet. Downward social comparison refers to comparing yourself to others you believe are worse off than you (Drivas et al., 2024). While it can boost self-esteem, it can make people arrogant and negatively impact social relationships.

Watching high-calorie videos had some positive effects, since there was a positive effect on body image and mood. However, there were also adverse effects, since watching the videos was associated with increased intention to diet. Watching lower-calorie #whatIeatinaday videos was associated with decreased mood, poorer

body image, greater upward social comparison, and decreased intention to diet (Drivas et al., 2024).

These results confirm findings by Davey and colleagues (2024), which suggest that watching #whatIeatinaday videos can influence a person's diet and body image. However, extending prior research, it suggests that the content matters. While previous studies suggest that comparing oneself to someone who is eating a small amount of food would increase dieting behaviours, these results suggest that it discourages them. Conversely, comparing oneself to someone who is eating large amounts of food seems to increase the desire to diet. Perhaps the focus on the unhealthy nature of eating large amounts influences viewers.

These results suggest that if medical professionals wanted to set up an online community to help their patients recover, videos with high-calorie consumption shouldn't be included because they might increase disordered eating, and videos with low-calorie consumption shouldn't be included because they might result in reduced body image. Both styles of videos result in social comparison, which is related to poorer mental health (Ruan et al., 2023).

The Positive Impact of Social Media

Although certain types of social media content can have a negative impact on mental health, it is possible to use social media in a positive way. Eichhorn (2008) found that popular online support groups for people with eating disorders offered significant support for people in recovery. This research could be applied to #whatIeatinaday videos because it shows the possible benefits of social media on mental health. #whatIeatinaday videos could be altered to fulfill a similar role that these support groups provide.

These online support groups communicated through emails and discussion boards. Members of the group asked for and gave support by talking about shared experiences, asking for information, and making self-deprecating comments. While self-deprecating comments are generally considered negative, participants in this study often used them to communicate how they are feeling and to try to get reassurance.

Eichhorn (2008) evaluated the amount of informational support, defined as providing assistance or guidance with a problem, and instrumental support, defined as offering resources. Most messages provide informational support than instrumental support. The members of the online community tackled shared experiences. Many of the messages were encouraging others to get better. The researchers also found that these groups were used to develop and maintain online social relationships.

The participants said that this type of social support was helpful because they could talk about sensitive topics, but since they were anonymous, they did not get embarrassed (Eichhorn, 2008). Even though social media usage often encourages disordered eating behaviour, groups like this can help people in their journey to recovery.

Medical professionals could work on developing a more organised platform designed to encourage recovery. However, although offering support and encouraging others to get better might be beneficial, these groups could also cause problems. For example, self-deprecating remarks or sharing information could encourage disordered eating behaviours. Therefore, if medical professionals do want to utilise online groups and social media posts, they should closely monitor what is being posted and shared.

While there are problems associated with #whatIeatinaday posts, they could be used as informational support, to show what life is like in recovery or what normal eating behaviours are. #whatIeatinaday posts could be used as a visual guide for healthy eating behaviours and could be used to show what healthy eating looks like in a way that feels more realistic and applicable to the patient's lives. If the videos showed examples of people who recovered, they could be more useful as inspiration for patients. #whatIeatinaday posts could be useful for sources of information and inspiration for patients.

A recent study examined the effect of body positive content on people in recovery (Pendleton-Cole, 2022). This research on the impact of social media could be applied to

#whatIeatinaday content, if this content were made into body positivity content. Body positivity content revolves around talking about feeling good about one's body, and the impact of society on body image.

The researcher had participants take part in semi-structured interviews about their experiences on social media and their recovery. The interviews were focused on their experiences with body positivity content. The themes present in the interviews were identified (Pendleton-Cole, 2022).

Peer support on social media was found to have both positive and negative consequences for people struggling with an eating disorder. It normalized the experiences, providing motivation for recovery and insight into what recovery is like. However, there was also a risk of seeing triggering content or engaging with content that could make the disorder worse.

Social media was seen as a space to find resources, learn about the personal nature of recovery, and receive education on recovery. (Pendleton-Cole, 2022). If #whatIeatinaday videos are used to help patients, any content shown would need to be strictly regulated. #whatIeatinaday videos could be used as a form of peer support.

Providing insight into what recovery looks like might be beneficial because the idea of recovery might be scary for some people. For example, if they can't picture what it would be like or might make assumptions that their life will be much worse if they recover. Normalizing eating behaviour is an important part of treatment.

Many people develop a fear of high-fat food and are often engaged in restrictive eating such as food avoidance (Hannson et al., 2011). Therefore, normalizing eating a variety of food, including high-fat food, might be beneficial. Normalizing recovery and a healthy relationship with food is important to create positive associations with recovery and to offset the impact of social media that normalizes restriction.

Types of Social Media Use

Using social networking sites is linked to poor body image, poor self-esteem and eating disorders. Participants in a recent study completed a survey that measured social media usage, problematic social media usage, body image, self-esteem, eating disorder symptoms, and body image concerns. (Santarossa & Woodruff, 2017). Problematic social media use was associated with lower body image, lower self-esteem, and higher eating disorder symptoms/concerns. Overall, general social media use was not related to body image or self-esteem, but it was related to higher eating disorder symptoms/concerns (Santarossa & Woodruff, 2017).

Since social media use is related to disordered eating behaviours, it makes sense that content that discusses food, often in a restrictive way, would increase disordered eating behaviours and have a negative effect on mental health. It follows that if people develop a reliance on social media, they would be more affected by it.

To neutralize the effects of problematic social media use or prevent it from becoming problematic in the first place, precautions should be put in place. To help reduce the reliance on social media, perhaps face-to-face interactions and offline hobbies should be encouraged, so that people don't rely solely on social media to meet their socializing and entertainment needs.

Implications

Any videos used by medical professionals would have to be screened for misinformation. Perhaps patients could be provided with training, in the form of educational videos, to recognize misinformation, to help them in the future. For instance, they could be provided with education on common misconceptions surrounding restrictive eating with credible sources. Credible sources should be science-based, objective, and transparent. For example, these videos could share information about how many calories people need to remain healthy and the dangers of malnutrition.

Videos could be made by nutritionists, therapists, or people in recovery. These content creators could explain why they avoid highly restrictive diets in their own lives. They could also give suggestions for eating a balanced diet without being highly restrictive or obsessive.

If the videos included citations from well-known and credible organizations, such as the World Health Organization, they might be seen as more credible. The creators could also bring attention to the credibility of the information they are sharing and explain the lack of credibility of the information often shared by content creators who are not healthcare professionals.

Conclusion

#WhatIeatinaday videos can increase disordered eating behaviours in people who watch them; however, these videos could be used by medical professionals to improve mental health if proper precautions are taken. Factors such as moralization, authenticity, misinformation, and the content of the videos can influence the impact these videos have on mental health. Online content can do harm or good depending on how it is used.

To limit the effects of moralisation, any videos provided by medical professionals should avoid moralizing language such as good and bad. The meals in the videos shouldn't be abnormally low-calorie or abnormally high-calorie, to prevent a negative impact on body image and eating behaviours. To use the benefits of authenticity and connection with the creator, videos should be casual and non-clinical. Patients should be educated on how to spot misinformation on social media. Any videos used should only include credible information. The content of the videos shouldn't include information that might increase restriction or negatively impact mental health. Any medical professional who uses these videos should also closely monitor the patient's response to prevent possible negative effects of watching the videos. Medical professionals should also put limits on the amount of time patients should spend with the videos to minimize the negative impacts of social media.

If the videos seemed more authentic, the patients might feel more connected to the content and therefore would be more affected by it. If the content creators talked about their experiences with disordered eating, it might help build a connection with the patients. Connection is important to people, but many patients might not feel comfortable talking about their experiences either with people they know or with people they might not know who have had similar experiences. These videos could provide a connection with someone who has a similar experience while maintaining the anonymity of the patient.

However, while social media can provide a connection with others, including a connection with people who have similar experiences, it doesn't replace face-to-face connections. Therefore, patients should be encouraged to interact with people in real life as well.

Future studies could investigate the long-term impact of body positive #whatIeatinaday videos on both causing and recovering from disordered eating. Future research could also investigate whether content that focuses on eating a balanced and non-restrictive diet has a negative impact on moods, self-esteem, and body image. Although it doesn't erase the negative impacts of social media on mental health, it is comforting to know that it might also be beneficial for disordered eating.

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The Impact of Technology on the Development of Self-Concepts in Children, including Possible Selves and Feared Selves: A Narrative Review on Qualitative Studies

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Abstract

The impact of technology on the brain has been researched extensively in a myriad of psychological domains. The development of self-concepts in childhood is influenced by technology, such as phones, computers, and social media. Self-concepts, meaning self-perceptions in various life contexts, include possible selves (future perceptions of the self), and feared selves (future perceptions of the self that are undesirable). In America, children as young as 8 years old are using social media, with a 17% increase in social media usage for 8–12-year-olds from 4.75 hours to 5.5 hours in 2020-2022, higher than the previous four years. Considering these statistics, it is imperative to reflect on the effect of this time spent using technology on how children think about themselves. Lastly, interventions for strong self-concept and possible self-development for children will be explored. Future directions could expand on the impact of technology on children's self-concepts based on different cultures and races, and types of technology interaction, including consuming, creating, playing and writing. As youth become increasingly enraptured by new technological advances, such as artificial intelligence, their benefits and effects constantly shape their attitudes and behaviours, which will their present and future self.

Keywords: *child development, social cognition, social media.*

Introduction

Defining the Self-Concept

According to Cordeiro and colleagues (2021), self-concepts are related to how individuals perceive their daily lives, including negative and positive moments. They are prone to changing over time, based on an individual's experiences, and the attention they spend remembering these experiences. They can be elevated, more positive, or decreased, more negative. Four life components where an individual evaluates themselves encompass the self-concept: personal, familial, social, and academic (Cordeiro et al., 2021).

While personal self-concept is simply a general self-perception (Cordeiro et al., 2021),

familial self-concept refers to a self-perception constructed by familial roles, environments, and relationships (Cordeiro et al., 2021). Family seems to be the ultimate genesis of any self-concept, as family members have the primary influence on a child's self-esteem and evaluation (Resett et al., 2016). After the initial bond between the child and the parent is formed, it will serve as a foundational structure for relationships outside of the family, impacting how a child perceives familial bonds for the rest of their life (Resett et al., 2016).

Social self-concept is defined as a self-perception of social interactive abilities, which is impacted by interpersonal relationships (American Psychological Association, 2023). This can either represent a self-perception of social status or a place in a social hierarchy, as well as social skills (American Psychological Association, 2023). For example, a self-perception of high status in a professional field, like believing a certain executive position is prestigious, can lead to a higher self-concept. To elaborate, membership in meaningful communities, such as religious groups or sports teams, can result in higher mental health (Michalski et al., 2020) and self-esteem (Krause, 2019), contributing to a more positive self-concept. Additionally, academic self-concept is a self-perception of academic abilities (Shavelson et al., 1976), which can include performance on tests, homework or cumulative grade average. Future self-evaluations can also occur, creating possible selves for each type of self-concept (Cordeiro et al., 2021).

In addition to perception and memory influencing the self-concept, physical context impacts how individuals view themselves (Jones, 2005; Prince, 2013; Reay & Lucey, 2000). For example, the idea of "place identity" describes how special or everyday places in people's lives can contribute to them developing their sense of self (Prince, 2013). Even geographical research has now begun to consider how various regions, whether "experienced, remembered, [or] imagined" (Prince, 2013, p. 2), can impact the developing self-concept of a youth (Jones, 2005, as cited in Prince, 2013; Reay & Lucey, 2000).

Furthermore, an experiment by Leyshon and Bull (2011) has demonstrated how youth from rural areas have developed an understanding of themselves through interactions with everyday environments. The sense of self may be entwined with the mind's remembrance and emotional connections with physical environments, though only with significant places. Specifically, the self-concept is created through the connection of the emotional, social, and narrative experiences within an individual's physical environment (Leyshon & Bull, 2011).

Defining the Possible Self and the Feared Self

A possible self is a self that could be realized in the future, according to how an individual perceives their current environment (Prince, 2013). It is the connection between an individual's current self-concept and their thoughts, and beliefs, positive and negative, about their future self (Prince, 2013; Stoddard et al., 2016). This would also include a feared self: a negative form of a possible self that represents the traits an individual would want to avoid in the future (Aardema & Wong, 2019). Feared traits include being bad, immoral, ugly, poor, violent, guilty, shameful, or corrupted. It is important to note that these traits only relate to the feared self if they are traits the individual is afraid to be socially perceived as having. These traits will not represent undesirable traits for a feared self if the individual currently has them or is nonchalant about developing them. Moreover, these traits could rise in response to social or cultural norms (Aardema & Wong, 2019). In addition to the components of a feared self, Aardema and Wong (2019) explain the notion of fearing the representation of a feared self or being ashamed that it exists. This uneasy state can describe someone being afraid of a feared self that can potentially ruin their current self, and others' opinions of that prospect (Aardema & Wong, 2019).

Additionally, possible selves are entwined with "naïve theory" (Higgins, 1998; Schwarz & Bless, 1992; Schwarz & Clore, 2007). This theory describes how among the possible selves that an individual imagines, ones that are more difficult to imagine are less probable to be realized (Higgins, 1998; Schwarz & Bless, 1992; Schwarz & Clore, 2007). To elaborate, the difficulty experienced when imagining a possible self can illuminate whether it is "worth pursuing." If it aligns more with an individual's

'true' self, it can be easier to pursue, as the individual can easily imagine that prospect for themselves (Oyserman et al., 2006). Possible selves that are more aligned with present goals of the individual would motivate a certain course of action and feared selves exemplify circumstances that should be avoided (Stoddard et al., 2016). Past research indicates that situations an individual chooses to pursue depend on their positive or negative visualization of themself in the present, as well as the future (Chick & Meleis, 1986).

Development of Self-Concepts, Possible Selves, and Feared Selves in Childhood and Adolescence

Gabel and colleagues (2025) examine how self-concepts differ in their development between the sexes by the responses of 6–15-year-old boys and girls to adjectives on the 'Self-Referent Encoding Task.' The findings suggest that both sexes perceive themselves differently, according to age and socialization differences. This could also apply to possible selves, as both sexes would imagine themselves differently in the future based on age and socialization. Overall, when given 12 positive and 11 negative adjectives, the young participants showed no difference in chosen words, implying that both boys and girls had similar positive and negative ideas about themselves throughout their childhood and adolescence (Gabel et al., 2025). These findings would suggest that the development of self-concepts rarely fluctuates based on gender, even with the consideration of age and socialization differences.

Furthermore, a study conducted by Cordeiro and colleagues (2021) had children 5–11 years old complete the 'Piers-Harris Self-Concept Scale for Children' (Piers & Piers, 1969). The results demonstrated how girls had marginally elevated self-concepts compared to boys. They also found that self-concept usually decreases with age for both sexes (Cordeiro et al., 2021), potentially occurring because of the numerous transitions that children experience as they grow.

In addition to sex differences, transitions can affect self-concept and possible self-development (Gabel et al., 2025; Stoddard et al., 2016). From the ages 9–12, a child's self-concept becomes increasingly negative, and from the ages 12–15, it decreases dramatically, indicating that self-concepts become particularly negative throughout early adolescence (Gabel et al., 2025). Stoddard and colleagues (2016) explain potential reasons for this occurrence; the effect of transitions throughout development leads children to adapt their self-concept to the environment. As a child moves from middle to high school, their self-concept changes, resulting in their view of the future changing. This crucial, challenging period of transition involves children being bombarded with new stimuli that influence their self-perception, including people, places, ideas, and experiences. For example, even the atmosphere of the new classroom when moving grade levels can elicit changes in the student's behaviour.

This seismic shift influences academic structure for the student, as they need to acclimate to new students, demands and contexts (Stoddard et al., 2016). The classroom atmosphere is the main place where learning occurs; therefore, it has a substantial influence on the student's self-concept, including their perception of their academic abilities. If a student is presented with positive stimuli and welcoming behaviour from teachers when walking into class, their self-concept can be altered positively, and they can feel better about starting a new chapter. This can be translated to them displaying more outgoing behaviour, like initiating conversation with new peers. However, if they are not welcomed, they can feel worse about themselves and their motivation for the school year ahead (Ryan & Patrick, 2001). They can feel discouraged about becoming involved at school, and shy away from joining clubs or participating in class.

Furthermore, it is crucial understand that adolescents are increasingly self-conscious and insecure as they are transitioning to adulthood. These feelings occur because of "age-dependent sensitivity of brain systems critical to socioaffective processes" (Somerville et al., 2013, p. 1). Fundamentally, the brain reacts more intensely to situations involving strong feelings, like going to a new school for the first time, and new socialisation opportunities, such as talking to different cliques in high school. This can alter their overall self-perception,

making it negative even if they are welcomed, as they might not feel like they are (Somerville et al., 2013). After their self-concept becomes negatively or positively affected by this new shift in the environment, they can also imagine themselves more or less confident in the future (Stoddard et al., 2016). It is evident that expected environmental changes, such as grade level changes, can affect a student's self-concept. However, ever-changing technology in this generation has now generated a myriad of new reactions that could exacerbate or mitigate these changes in youth's lives. Whether the impact of technology is positive or negative, it will unequivocally have a powerful effect.

Conversely, according to Prince (2013), young individuals are prone to developing one of two types of self-concepts, expansive or blunted, which both represent a different outlook on life. An expansive self-concept refers to when an individual has a clear or even excited perspective of future experiences, involving visualizations of places relating to that excitement. For youth, these places can be the buildings where recreational programs that promote creative self-expression and self-exploration are run. It is important to note that the experiences youth have at these places can influence their thoughts about their future selves. Their thoughts are founded on current experiences that positively or negatively contribute to their sense of self, leading them to feel either hopeless or hopeful about the future (Prince, 2013).

Secondly, a blunted self-concept refers to when a young individual cannot ascertain the future, therefore living only in the present (Prince, 2013). This can occur when youth are reminded that the future cannot be predicted and have limited visualizations of future possibilities. For example, if a youth is walking to school, and is faced with indications that their school is unsafe (i.e., being welcomed by unfriendly faces or having to walk through metal detectors before entering), they are likely to connect those experiences with their self-concept. Places that evoke imagery of a time when things are uncertain lead to the idea becoming readily available in the mind (Prince, 2013).

Technology and Self-Concepts, Possible Selves, and Feared Selves in Childhood and Adolescence

Children's immersion in technology is ubiquitous, constantly influencing how they connect with others, as well as express themselves (Norman et al. 2015). Of American teens 13–17 years old, 97% of girls and 93% of boys had access to a smartphone at home (Pew Research Center, 2024a). Moreover, from this sample, 92% of teens aged 13–14 and 97% of teens aged 15–17 had access to smartphones at home (Pew Research Center, 2024a). These results could explain why 47% of girls and 45% of boys said they use the internet "almost constantly" (Pew Research Center, 2024a). In general, these findings demonstrate how children have become more independent because of technology, and its impact on their daily lives as they become more familiar with it (Neumann et al., 2022). One study explored the effects of technology use on 500 youth, who averaged 12 years old (Jackson et al., 2010). They found that using different types of technology had different effects. Specifically, video games had negative effects, and internet use had a positive influence on self-concept. However, for each gender, it depended on the type of technology, as each type of use affected their self-concepts differently.

For example, a particular finding indicated that boys play more video games than girls. This was correlated with them having a more negative behavioural self-concept and lower self-esteem (Jackson et al., 2010). However, adolescent boys can also experience increased negative effects on their social self-concepts if they become addicted to playing (Haidt, 2024), blurring the line between real-world friendships and online ones. In addition to social self-concept, males' sexual and behavioural self-concept can be affected by excessive exposure to pornography. This can impact their real-life romantic relationships, causing them to find their partners less attractive after watching (Haidt, 2024). Nevertheless, adolescent males do not have a strong negative perception of technology (Cai et al., 2017).

For girls, a negative attitude toward technology was more prevalent than for boys (Cai et al., 2017). A reason could be is their personal self-concepts are more negatively

affected by social media usage (Twenge et al., 2022), as they generally spend more time on it than boys do (Pew Research Center, 2024b). Particularly, the social media apps associated with posting images or videos of yourself or your face, like Instagram, Snapchat and TikTok (Pew Research Center, 2024b). An experiment found that when adolescent girls were exposed to original or more attractive Instagram images, they felt lower body image after viewing the modified images (Kleemans et al., 2016).

Young girls' social self-concepts have also been influenced by the way social media apps are organized. Their perceptions of how relationships work have been altered, especially related to attachment (Levine & Stekel, 2016). Social media facilitates how girls communicate with and respond to each other. The most common behaviours to keep in touch would be following friends' accounts, making sure to always be reachable, and exploring new content and connections. Moreover, a study found evidence that technology, especially social media apps, is not always used negatively or corruptively by girls. It can be used to create genuine relationships or retain close friendships for a long time.

However, with the ability to make attachments easily, there is a possibility of unwanted connections, as some of the participants did remark how they experienced cyberbullying (Levine & Stekel, 2016). In addition to social self-concepts, the familial concept in girls was also affected by social media usage. Some participants remarked how they would consult their parents for help to navigate social challenges online, strengthening their parental bond (Levine & Stekel, 2016).

In general, social media has monopolized the attention of most of today's youth. In 2023, 59% of teens aged 13–17 years used Instagram, while 63% of them used TikTok (Pew Research Center, 2024b). While an adolescent's use of a certain social media app is beneficial to analyze, it is also important to examine how many times they are on them. From this sample, 71% used YouTube daily, and 58% used TikTok daily, the most frequently used social media apps. However, 22% of girls and 12% of boys reported using TikTok "almost constantly," while 15% of girls and 18% of boys reported using YouTube "almost constantly" (Pew Research Center, 2024b). Considering the excessive amount of time spent on these apps, it is necessary to review the actual content they are seeing.

Within 2.6 minutes of being on TikTok, children are exposed to eating disorder or self-harm content (Perry, 2025b). The development of their possible selves (Prince, 2013) could become distorted based on their perception of normal beauty ideals. Additionally, their feared selves (Aardema & Wong, 2019) could become representations of perfectly normal body types, leading them to consider alternative paths to achieving their desired body type. According to a survey sent out by the YMCA for BeReal, a national campaign promoting body confidence in youth, 36% of teens stated that they would do "whatever it took to look good," and 10% of them had thought about doing cosmetic surgery (YMCA, 2017, p. 5). This demonstrates that the worldview of social media is unrealistic and can ultimately corrupt a child's sense of self-understanding (Perry, 2025a).

In addition to the distortion of beauty ideals, increased internet use by children is associated with significant decreases in language skills and attention (Ricci et al., 2023), as well as memory (Dong & Potenza, 2015). Children are then at risk for developing a decreased or blunted self-concept (Prince, 2013), as well as inadequate possible selves (Aardema & Wong, 2019). Low-achieving students often have low self-concepts and consequently have a higher probability of developing negative possible selves (Hannafin, 2017).

One online activity youths can be impacted by is the Blue Whale Challenge, which targets youth to complete harmful tasks, both physical and psychological (Mukhra et al., 2017). Throughout the tasks, users become increasingly disconnected from reality; the tasks become increasingly associated with suicide (Mukhra et al., 2017). A suicidal mindset contributes to youth having less faith in their future, leading them to not visualize any possible selves (Prince, 2013) or being less inclined to. Their social self-concept also becomes increasingly negative or non-existent as their entire world exists online, isolating them, leaving a smaller probability to develop real-world connections (Jackson, 2008). The last challenge prompts participants to take their own

life (Mukhra et al., 2017). It is evident that the existence of this despicable phenomenon poses a threat to children everywhere.

Aside from the negative effects of technology use, there are also several benefits (Cordeiro et al., 2021; Perry, 2025c; Prince, 2013; Seymour et al., 1987). Academic self-concept is increased after playing video games, as it augments levels of working memory and response inhibition (Kovess-Masfety et al., 2016; Sampalo et al., 2023). Playing video games can increase socialization and social skills, though only if children play with their friends (Perry, 2025c). Moreover, simply spending time online with friends has been found to strengthen a child's social connections (Ricci et al., 2023), contributing to higher positive self-concepts (Cordeiro et al., 2021).

Other positive effects of technology can be increasing social and familial self-concept. It can contribute to stronger connectivity with significant people in an individual's life, such as family members or close friends (Conway, 2025). Whether communicating with a single family member or many friends in a chat, cohesive networks facilitate youth getting emotional and psychological support, as well as simple socialization (Conway, 2025). Additionally, social self-concept can be increasingly developed by youth strengthening and expanding their social circles online. Technology can serve to strengthen current social ties (Jackson, 2008). According to an experiment by Jackson and colleagues (2010), children who were 12 years old who used cell phones for longer periods had more positive social self-concept than those who used them for shorter periods. Moreover, for youth struggling with their social skills, there are many opportunities to strengthen those skills. They can become more comfortable by practicing conversing online before trying in person (Weir, 2023).

Another benefit of technology use for children's self-concepts includes motivation (Seymour et al., 1987). Fifth and sixth-grade students who were given the option of doing their work on a computer, compared to on paper, were more motivated to complete the task. Their feelings contribute to their perspective of their academic ability, which affects their academic self-concept (Seymour et al., 1987) and academic possible selves. Additionally, resources online that can help youth with coding or building websites and apps can enhance creativity and productivity (UBC Extended Learning, 2024). Participants aged 16–24 in an experimental coding program called 'go_girl code + create' felt greater academic self-concepts because they were able to create and interact with technology instead of passively consuming information online (Denton-Calabrese et al., 2021).

Furthermore, their personal self-concept can be elevated by using self-growth and learning resources online, which can contribute to higher confidence and self-esteem (Conway, 2025). Mental health resources, including counselling and emotional support services like 7 Cups, Kids Help Phone, and OneStopTalk, can be accessed online through the quick help of a Google search. Kids Help Phone is an electronic confidential mental health phone service that helps youth with any issue, while 7 Cups and One Stop Talk are free therapy counselling services, the latter being specifically for youth aged under 18 years old (7 Cups, n.d.; Kids Help Phone, 2025; One Stop Talk, 2023). If a youth is struggling with poor mental health, they can benefit from therapy (Centers for Disease Control and Prevention, 2024), as well as emotional support provided by talk or text.

While self-growth and mental health materials primarily benefit the personal self-concept, it is correlated with academic self-concept, which affects a youth's perception of their academic skills (Conway, 2025). If their mental health is poor, they could be prone to feeling worse about underperforming, like getting a lower grade on a test.

Potential Interventions

Potential interventions for increasing self-concepts and possible selves could be directed toward improving aspects that contribute to their degree of positivity like happiness and motivation (Stoddard et al., 2016). For this to work, there needs to be congruence between understanding the individual's context and their self-perception, otherwise the intervention will not be effective (Stoddard et al., 2016). Several factors can be considered when determining how to elevate self-concepts in children while

their technology use increases (Gentile et al., 2012; Moyer, 2022; Thariq, 2018).

Primarily, emotional or physical support from the caregiver strongly affects whether the self-concept becomes elevated or reduced throughout physical and psychological development (Thariq, 2018; see also Cordeiro et al., 2021; Gabel et al., 2025; Prince, 2013). This support can be given in the form of statements that parents say to their children regarding mutual respect and care for family relationships (Thariq, 2018). If there is strong familial support, the child's self-concept will most likely be high. Moreover, their possible selves will most likely reflect their current state, leading them to think more positively about the future (Prince, 2013).

While screen time limits can be effective (Ponti et al., 2017), it is imperative to understand that children will be captivated by screens indefinitely and that children will most likely continue to use them even more in the future, based on significant increases in usage in the last few years (Moyers, 2022). In addition to strong familial relationships, parental monitoring of online content has been shown to reduce children's exposure to violent media (Gentile et al., 2012). It is paramount to have children be cognizant of the content they are watching and become skilled at discerning between harmful and helpful content.

Conclusion

To conclude, technology usage has shown negative and positive effects on self-concepts, possible selves, and feared selves in childhood. Negative effects are distorted perceptions of reality, including self-perception (Mukhra et al., 2017; Perry, 2025a), exposure to harmful content (Perry, 2025b), decrease in language skills and attention (Ricci et al., 2023), lower self-concepts (Prince, 2013), inadequate possible selves (Aardema & Wong, 2019), and higher probability of feared selves (Aardema & Wong, 2019). Conversely, positive effects are increased communication skills (Perry, 2025c), higher self-esteem and motivation (Seymour et al., 1987), strengthened social connections (Ricci et al., 2023), higher positive self-concepts (Cordeiro et al., 2021; Prince, 2013), and a higher hope about possible selves (Prince, 2013).

Future research should explore the impact of technology use on self-concepts of adolescents in distinct cultures and races. Self-concepts, particularly familial, and social are represented differently in each culture, so the influence of technology could be different. Cultural attitudes and behaviours toward technology vary as well, so adolescents may have a different opinion based on their cultural identity.

Moreover, the study of how self-concepts and possible selves develop based on types of technology interaction would be beneficial, including consuming, creating, developing, writing, and playing. This would further illuminate which technological interactions lead to more negative or positive self-concepts, providing insight into how boys and girls influence their self-concepts based on their preferred uses of technology.

Any findings could help both genders develop each type of self-concept, as well as their possible selves that are relevant to who they are as individuals. It is imperative to learn more about what impacts adolescent self-concept development, as these concepts will ultimately shape who they are in adulthood.

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The Importance of Parental Involvement in Children's Literacy Development

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Abstract

This paper explores the critical role of parental involvement in fostering children's literacy development, particularly during the foundational years of early childhood. Drawing from empirical studies and real-life cases, including the Genie Wiley case, the paper examines how factors such as home literacy environments, prenatal engagement, socioeconomic status, school participation, parental beliefs, multilingualism, and the intersection of educational technology and digital mediation shape literacy outcomes (Piasta, 2016). It also addresses the broader ecological influences of how nature and nurture interact in shaping literacy development independent of parental input. Ultimately, the findings underscore that while various external factors contribute to literacy development, consistent and active parental involvement remains a dominant force in shaping children's academic, social, and emotional success. The paper suggests some recommendations for empowering parents through educational interventions and policy reforms aimed at enhancing home literacy environments.

Keywords: *Literacy development, parental involvement, parent-child relationship, positive environments.*

Introduction

Literacy is a major component of life. It encompasses not only the ability to read and write, but also speak, comprehend, and interpret various forms of language (Piasta, 2016). Successful development of these skills is crucial to navigating everyday life, especially during the primary years of learning (ages 0-12), during which children acquire fundamental skills and knowledge (Piasta, 2016; Popli et al., 2013). Factors contributing to literacy development include early exposure to language, quality of instruction, access to books and resources, parental involvement, individual differences, and socioeconomic status (Perry, 2012).

Among these various factors, parental influence emerges as the cornerstone of children's literacy development (Baker, 2013; Cotton & Wikelund, 1989). Children are more likely to develop strong reading and language skills when parents are actively engaged (e.g., reading aloud or active dialogue exposure). Conversely, insufficient parenting (e.g., not paying attention to the child or not engaging in conversation with the child) may lead to difficulties in fluent reading, understanding complex texts, verbal expression, and applying

literary knowledge to real-life scenarios (Baker, 2013; McArthur & Castles, 2017).

Considering the important role that parents play in children's developmental outcomes, this paper asserts that parental involvement is the most important factor in promoting children's literacy development. By doing so, this review aims to help parents recognize the pivotal influence they have on their child's literacy development and highlights why early parental involvement is essential for children's long-term success. It also seeks to inform educators and scholars on how to better support and empower parents, especially through educational workshops, flyers, and other accessible opportunities.

In addition, the paper will examine contradictory views, such as the influence of biological predispositions and environmental factors, which suggest that parents may not be the only influential factor in a child's literacy development. Despite the multifaceted nature of literacy development, this literature review reveals stronger evidence supporting the importance of parental involvement in shaping children's literacy outcomes.

The Genie Wiley Case and Literacy

A prime example demonstrating the importance of parenting in early childhood literacy development is the Genie Wiley case (Fromkin et al., 1974). Genie was discovered in 1970 at the age of 13, after spending most of her life locked in a dark room, isolated and deprived of normal human interaction. The case has many complex elements, but it is widely used to illustrate how social isolation and language deprivation can hinder a child's ability to acquire literacy. When Genie was found, she could neither speak nor understand language at the age of 13.

Cognitive stimulation, including talking to infants, reading aloud, and exposing children to rich verbal interactions, must begin very early in life to activate the brain during its most plastic and receptive stages (Rakesh et al., 2024). Unfortunately, Genie did not receive any of these critical inputs. Her complete lack of exposure to language and human engagement during the sensitive period of development resulted in profound delays.

After intensive therapy, she quickly learned how to talk, read, and write, but at a very limited capacity, as the size of her brain was smaller than average due to halted development (Fromkin et al., 1974). She also struggled to maintain conversations because she had little exposure to the natural flow of dialogue, such as when to speak, understanding of sarcasm, or interpreting humor.

Overall, Genie's story highlights the responsibility parents have in providing literacy development opportunities, and the crucial role of language-rich environments in supporting literacy and cognitive development.

Prenatal Engagement: Language Learning Begins Before Birth

The parent-child relationship begins shaping literacy development long before a child is born. For instance, Jones & Englestad (2004) found that maternal reading during pregnancy has been associated with speeding the emergence of a child's first word utterance. This is due to active auditory stimulation the fetus experiences, which accelerates early neural connections related to language processing.

In addition, prenatal reading introduces the unborn child to various linguistic and cultural nuances, increasing their familiarity with language diversity (Joaquim et al., 2023; Jones & Englestad, 2004). These early exposures of prenatal engagement enrich the child's linguistic repertoire and promote cognitive development, preparing the child for future literacy acquisition (Joaquim et al., 2023; Jones & Englestad, 2004).

Reading to the fetus not only acquaints the unborn child with linguistic patterns but also cultivates parent-child emotional attachment (Joaquim et al., 2023; Martens, 2013). As the mother reads aloud, her voice becomes a comforting and familiar presence for the developing baby, establishing the groundwork for a strong parent-child bond (Joaquim et al., 2023; Jones & Englestad, 2004; Martens, 2013).

Overall, these findings emphasize that prenatal experiences play a foundational role in language and literacy development, reinforcing the value of parental involvement before birth.

Home Literacy Environment and Language Nutrition

After birth, parents again play a central role in cultivating a healthy environment to foster positive literacy development in their children. Home literacy environment, characterized by the available literacy resources or activities used at home to foster children's literacy development, is a critical determinant of a child's cognitive and academic performance, specifically in reading and language skills (Cheng et al., 2024; Dong et al., 2020).

For instance, Baker (2013) indicates that cognitive stimulation through parent-child interactions such as reading, having conversations, telling stories, and singing lullabies are linked to advanced literacy, language, and social-emotional skills. Engaging in simple practices like reading to a child nightly and conversing 10-15 minutes about their toys can effectively foster literacy development.

On the other hand, poor home literacy environments involve disengaged parenting, minimal literacy resources at home, and minimal dialogue between parent and child, which hinders literacy development at the cognitive level (Baker, 2023; Dong et al., 2020). These contrasting outcomes underscore how showing interest in a child's reading and writing contributes to the home literacy environment, further fostering healthy socio-emotional development as the child feels valued and cared for.

A key part of a strong home literacy environment is *language nutrition*, which Zauche and colleagues (2016), describe as rich, responsive verbal inputs children receive from caregivers that fuel early brain and language development. One of the most impactful forms of language nutrition is conversational turns, which is the back-and-forth exchange between adult and child. In infancy, this may simply be a caregiver responding to a baby's coos or babbles.

While these interactions are not structured dialogue, the early vocal interactions stimulate the child's brain and lay the foundation for understanding sounds, patterns, and conversational rhythm (Rakesh et al., 2024; Zauche et al., 2016). Importantly, these early speaking opportunities not only enhance verbal communication but also build oral language skills that serve as a foundation for later reading and writing. Dockrell and Connelly (2009) emphasize that speaking, listening, reading, and writing systems develop in synchrony, and that oral language directly influences compositional quality.

Children with strong oral language skills are more likely to generate well-structured, coherent writing, whereas those with limitations in vocabulary tend to produce shorter texts with more grammatical errors. Thus, fostering rich oral interactions and daily dialogue with children in early childhood greatly supports literacy growth.

Socioeconomic Status and the Mitigating Role of Parental Involvement

Parental involvement is so powerful that it can potentially offset the literacy development challenges faced by children from low socioeconomic backgrounds, who may have limited access to books, less exposure to vocabulary-rich environments, and reduced opportunities for educational enrichment (Cheng et al., 2024). When parents actively engage in their child's literacy development, they provide critical support and reinforcement that helps reduce the risk of literacy difficulties caused by these socioeconomic disadvantages (Cheng et al., 2024; Ha, 2023). This may look like reading bedtime stories, using online reading resources, and engaging in interactive literacy exercises, which help mitigate the adverse effects of low socioeconomic status on literacy development (Ha, 2023).

Some parents may not be equipped with the knowledge and resources to effectively support their child's literacy development, especially if they themselves have limited literacy skills (St. Clair et al., 2012). However, they can still create a vocabulary-rich environment by engaging in meaningful conversations with their children, such as having the child describe their surroundings during a walk in the neighborhood or discussing their favorite foods during mealtime. These conversations expose children to a variety of words and concepts, supporting their literacy development. (Ha, 2023; St. Clair et al., 2023).

In addition, oral storytelling is a powerful tool which helps children develop listening skills and foster an appreciation for narrative structure in low socioeconomic homes (Ha, 2023; McKeough et al., 2008). When caregivers share stories they model sentence structure, introduce new vocabulary, and help children understand story elements like sequence and character development (Ha, 2023; Maddumage, 2023). Additionally, Maddumage (2023) emphasizes that storytelling fosters creativity and critical thinking, particularly when parents bring stories to life through dramatic voices and expressive gestures. Parents can further encourage children to retell or create their own stories, further pushing their literacy development. These interactions stimulate all domains of literacy development, from comprehension to oral literacy.

Thus, parental involvement emerges as an indispensable factor in mitigating the negative effects of low socioeconomic status on children's literacy development.

Parental School Involvement and Home Literacy Environment

Parental involvement in schools notably influences the extent of home literacy environments and children's literacy development. Active parental engagement in child's education typically involves attending parent-teacher conferences, volunteering in school events, providing transportation, and participating in extracurricular activities (Sapungan & Sapungan, 2014). Families where parents are actively involved in schools often mirror this engagement at home, and vice versa, thus fostering positive literacy development in their children (Sapungan & Sapungan, 2014; Sun et al., 2023).

For instance, Sun and colleagues (2023) examined the influence of parental involvement in schools on children's academic achievement and home literacy environment. As anticipated, they found that parents actively involved in their child's school tended to foster a more supportive home literacy environment. The authors also noted that this support, of parental involvement in schools, is prominent across all socioeconomic statuses, but it is slightly more effective in mitigating the influence of lower socioeconomic status on academic outcomes.

Furthermore, Cotton & Wikelund (1989), found that children whose parents were actively involved in their schools reported greater self-esteem and confidence, which was positively reflected in the home literacy environment and strengthened literacy development. Ultimately, active parental involvement fosters a sense of encouragement for children in both school and home settings, underscoring the pivotal role of parents across various domains and how those interconnected factors influence a child's overall literacy development.

Parental Beliefs and Literacy Outcomes

Parental beliefs play an important role in molding the home literacy environment, which, in turn, greatly impacts children's literacy development. Parental literacy beliefs, referring to the parents' wishes or goals that shapes the child's reading comprehension by influencing literacy knowledge acquisition, can be either holistic or skills based (Dong et al., 2020; Lai et al., 2024).

Parents from Western cultures usually encompass more holistic beliefs, encouraging literacy activities like storytelling and active dialogue which enhance intrinsic motivation and positively contribute to literacy development (Dong et al., 2020; Lynch et al., 2006). Conversely, parents who hold Eastern cultural beliefs tend to prioritize skill-based learning, characterized by limited active educational engagement and a greater reliance on paper-based instruction, like assigning children worksheets and evaluating them upon completion (Dong et al., 2020). This non-engaging activity of simply assigning tasks to a child without parent-child collaboration does not stimulate the child and thus does not contribute to positive literacy development (Lai et al., 2024; Lynch et al., 2006; Rybak et al., 2002).

To investigate this phenomenon, Dong and colleagues (2020), assessed students on various subjects from a diverse classroom and interviewed their families regarding their literacy practices at home. Interestingly, they found that families with an Eastern cultural background did have more skill-based beliefs,

and their children performed exceptionally on the mathematical component of the assessment, but average on the literacy component.

On the contrary, families with a Western cultural background possessed more holistic beliefs, and their children achieved exceptional marks on the literacy components, and moderate marks on the mathematical portion of the assessment. The importance of parental beliefs in children's literacy development is emphasized by these findings, highlighting the importance of promoting holistic beliefs to cultivate a supportive home literacy environment.

Parent Roles in Multilingual Contexts

English language learners (ELLs) are students whose primary language is not English, so they are often enrolled in additional language support classes to support their proficiency in literacy skills (Statistics Canada, 2024; Umansky et al., 2023). Between 2021 and 2023, 2.1 million students in Canada, and 5.2 million students in the United States from ages 5-18 were enrolled in ELL programs (Statistics Canada, 2024; National Center for Education Statistics, 2024).

For ELL students, the challenges often stem from limited exposure to English outside of school, as shown by Umansky and colleagues (2023), teachers often assign 20 minutes of home reading to help strengthen literacy skills, but in multilingual households where English may not be part of daily communication, this is difficult to sustain (Dixon et al., 2025; Zhang et al., 2023). For instance, in many Asian contexts, English is taught primarily as a foreign language with little opportunity for daily use, making proficiency more difficult to attain and leaving students reliant on formal instruction (Zhang et al., 2023). Due to this, most of these students remain in ELL programs because their progress in reading and writing skills do not improve (Dixon et al., 2025; Umansky et al., 2023).

Furthermore, longitudinal studies indicate that ELL students who begin school with limited literacy skills in the instructional language tend to advance more slowly toward proficiency goals, and many do not achieve the required skills by the end of elementary school (Umansky et al., 2023). However, these literacy challenges faced by ELL students can be mitigated if there is active parental involvement.

Dixon and colleagues (2025) found that bilingual children's literacy development is shaped by the quality and quantity of language exposure at home. Maintaining the native language alongside the instructional language strengthens all areas of literacy development, specifically vocabulary, phonological awareness, and cognitive flexibility, while also preserving cultural identity.

The *one-parent–one language* strategy is effective at enhancing a child's literacy skills in both languages (Dixon et al., 2025; Zhang et al., 2023). In this model, one parent communicates primarily in the home language (e.g., Punjabi) while the other uses the instructional language (e.g., English), ensuring balanced exposure to both languages. Aleksić & Duruș (2025) further highlight that the quality of home literacy activities, including interactive reading, storytelling, and engaging children in meaningful conversations, can have a greater impact on literacy growth than simply focusing the amount of time spent.

In addition, as discussed earlier in the paper, parental collaboration with teachers to align home and school practices is beneficial for the children as they receive consistent support across both environments. This can look like a parent reading the same short story assigned in class and then discussing it with the child over dinner or intentionally using vocabulary from the classroom spelling tests. Such natural applications help bridge classroom learning and daily life, making English practice more engaging and natural.

Thus, parents hold the crucial responsibility of intentionally exposing their child to both languages in multilingual households to ensure successful literacy development for ELL students.

Technology and Literacy Development: The Role of Parental Mediation

In today's digitized society, technology has become an increasingly prominent aspect of children's daily lives. Bautista and colleagues (2024) describe how parents frequently rely on televisions, smartphones, or tablets as convenient tools to occupy or soothe young

children while attending to other responsibilities. This tactic to distract children is understandable given the demands of modern life, but the way children are granted access to digital technologies plays a critical role in shaping developmental outcomes.

When technology use is carefully monitored and supported by adult guidance, it can offer meaningful educational benefits (Bautista et al., 2024; Soyoof et al., 2024). Conversely, unsupervised or excessive exposure is linked to many negative consequences, including diminished attention span, delayed language acquisition, and reduced social interaction (Soyoof et al., 2024; Szabó et al., 2024).

In the realm of literacy development, technology can be highly beneficial when used appropriately. Instead of simply handing a phone to a child to watch videos or play non-educational games, caregivers can engage children with digital tools, such as interactive eBooks that are intentionally designed to support early reading skills (Bautists et al., 2024; Soyoof et al., 2024). Bautists and colleagues (2024) emphasize how the multimodal features of educational technology, such as animations, adaptive feedback, and audio narration, have been shown to support early decoding skills, letter-sound recognition, phonological awareness, narrative comprehension and sustain children's engagement in literacy tasks.

However, parental mediation plays a vital role in ensuring that technology use supports rather than hinders literacy growth. Strategies such as co-use, active mediation, and guided scaffolding can transform screen time into a collaborative learning experience (Soyoof et al., 2024). For example, when parents read digital stories alongside their children, ask questions, and explain new words, they enhance both comprehension and critical thinking (Soyoof et al., 2024).

These mediated interactions turn technology use into a positive outcome for literacy development, once again highlighting the important role of parents in children's literacy development.

Other Considerations

Despite all the evidence presented on parental involvement being central to literacy development, other research suggests it is the accumulation of multiple sources that influence childhood literacy. This includes the interplay between biological predispositions and environmental supports, in other words, the interplay of nature versus nurture. Hart and colleagues (2021) explored this idea and found that children's literacy outcomes were often influenced by both environmental transmission and genetic inheritance, a phenomenon known as *genetic confounding*. This interplay occurs through gene-environment correlations, where a child's inherited traits influence both their exposure to certain environments and how they respond to them.

For literacy, this means that the same parental characteristics that contribute to creating a rich home literacy environment (e.g., love of reading, strong language skills) may also be genetically transmitted to children, influencing their literacy potential before environmental factors even take effect. Understanding this interaction between nature and nurture helps broaden the discussion and provides alternative perspectives, rather than solely focusing on parental involvement in literacy development.

Twin and adoption studies consistently demonstrate that biological parents exert a stronger influence on literacy-related abilities than adoptive parents (Petrill et al., 2005; Stromswold, 2001). For instance, Byrne and colleagues (2005), found that even when adoptive parents create rich literacy environments, engage in reading activities, and provide ample support for their child's education, genetic predispositions inherited from biological parents still exert a great influence on literacy outcomes. Such that reading, phonological awareness, spelling, and rapid naming exhibited notable genetic influences with only minor effects from environmental factors (Byrne et al., 2005; Tucker-Drob & Briley, 2014).

However, orphan studies provide a stronger basis on the nurture side, illustrating how children can achieve comparable literacy levels with strong environmental resources such as supportive caregivers, community engagement,

and quality education (Ebrahimpour et al., 2021; Debebe, 2009). For instance, Ebrahimpour and colleagues (2021) compared literacy development of orphans to children with parents, finding that there is not a substantial difference in literacy outcomes between the two groups. In fact, some orphans showed greater literacy skills, which is likely due to enriched educational environments and the resilience fostered by supportive networks beyond the parents.

Furthermore, Novelle and Gonyea (2016) argue that it is the quality of the home literacy environment, not the provider, that determines literacy outcomes, and that with sufficient support, any child can develop strong literacy skills regardless of genetic factors. This interaction between nature and nurture illustrates the complexity of literacy development.

While genetic inheritance sets the foundation for literacy development, environmental supports can amplify or buffer those predispositions (Hart et al., 2021). A child with strong genetic predispositions toward language might excel with minimal support, whereas a child with genetic vulnerabilities may require a richer home literacy environment to achieve similar outcomes. Orphans who succeed academically often do so because environmental supports are strong enough to counterbalance potential genetic risks, while adopted children's outcomes may more strongly reflect the influence of inherited traits, mediated by the environments they experience (Ebrahimpour et al., 2021).

Ultimately, a similar pattern emerges in both cases: biology may set a range of literacy developmental outcomes, but the environment determines how close a child comes to realizing their full potential. Whether that support comes from parents, guardians, teachers, or community support, an enriched literary environment is vital for fostering positive literacy development. Therefore, parental involvement remains a crucial and adaptable factor, as it can be strengthened through targeted interventions or fulfilled by other caregivers in similar roles.

Conclusion

Parental involvement is a powerful and consistent contributor to children's literacy development, shaping not only their social, behavioral, and emotional growth but also their ability to read, write, and communicate effectively (Piasta, 2016; Popli et al., 2013). From the earliest stages, prenatal engagement provides crucial auditory stimulation that strengthens neural pathways for language, laying the groundwork for literacy understanding (Joaquim et al., 2023; Jones & Englestad, 2004).

Ultimately, rich home literacy environments filled with reading, storytelling, and responsive conversations foster strong language development and cognitive skills. Parents' active participation in schools further reinforces these practices, bridging home and classroom experiences while boosting children's confidence and academic engagement (Cotton & Wikelund, 1989; Sapungan & Sapungan, 2014; Sun et al., 2023).

Equally important are parental beliefs and intentional guidance in multilingual households, which ensure balanced exposure to multiple languages and cultivate literacy across diverse contexts (Dong et al., 2020). Finally, in today's digital world, parents' thoughtful mediation of technology turns screen time into meaningful literacy experiences (Bautista et al., 2024; Soyoof et al., 2024).

Collectively, this evidence highlights the robust role of parents in a child's literacy development. While genetic predispositions (nature) and broader environmental factors (nurture) also play a role, the nurturing provided by parents and caregivers consistently proves to be the most influential factor in helping children develop strong literacy skills, making the nurture side of the equation strong (Hart et al., 2021).

Furthermore, these findings provide vital future implications in creating and implementing targeted interventions and support systems to teach families how to foster both traditional and digital home literacy environments. Recognizing the pivotal role parents play in shaping a variety of aspects of a child's literacy journey, educational institutions, policymakers, and community organizations

must prioritize initiatives that empower parents to become effective literacy mentors.

For instance, St. Clair and colleagues (2012), implemented a program for ELL students and parents from low-income families, teaching them ways to foster positive home literacy environments. Findings reflected a positive outcome, indicating that empowering immigrant families with new knowledge and skills on how to foster children's language development results in enduring improvements in literacy skills.

Thus, to promote meaningful parental involvement, it is essential to provide families with accessible resources, culturally responsive training programs, and ongoing guidance. Supporting parents in this way strengthens the home literacy environment and ensures that all children have the opportunity to succeed in their literary journeys.

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Parental Autonomy Support and its Implication for Children's Self-Esteem, Emotional Health, and Prosocial Tendencies

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Abstract

Self-determination theory (SDT) deems autonomy to be one of three universal needs for all humans. Autonomy supportive parenting is characterized as parental responsiveness towards children's emotions, feelings, ideas, and perspectives. This paper emphasizes the SDT definition of autonomy as feeling volitional control over one's actions compared to the common misconception of autonomy as being a sense of independence and individualism. It discusses the application of SDT in both Western and Eastern societies and aims to highlight the importance of autonomy supportive parenting. The literature reveals that the need for autonomy is prevalent in both Western and Eastern societies. The fulfillment of autonomy needs in early childhood and adolescence has been associated with better emotional health, higher self-esteem, and promotes prosociality. Thus, suggesting that early autonomy support provided by caregivers builds a foundation for better developmental outcomes later in life. These findings may be especially pertinent for future investigations regarding autonomy support as a potential mitigator for mental health concerns later in life.

Keywords: *developmental psychology, parenting, self-determination theory, emotional health, autonomy-granting.*

Introduction

Socialization of prosociality is a crucial part of social development as it builds a foundation for children to build positive social relations with others. Socialization principles of prosociality begins in infancy through affiliative exchanges between the child and other social agents which are facilitated by processes such as imitation, sharing and giving behaviours, and positive emotional interactions (Brownell & The Early Social Development Research Lab, 2016). Socialization agents, such as parents, are invested in understanding which facets of parenting can maximize their child's well-being, promote prosocial tendencies, self-confidence in their children and how they can best support their children in times of hardship. While in the Western context, it may seem evident that the best developmental outcomes stem from nurturing and supportive environments, it is essential to gain a deeper understanding of what constitutes a positive environment and how it can be fostered. Autonomy support may be one

essential factor for cultivating caring environments where children feel in control of their actions and feel motivated to be active agents in their development. This paper aims to emphasize the importance of autonomy supportive parenting across Western and Eastern cultures and the associated developmental outcomes which result from the extent to which children's autonomy needs are met. In particular, I will be addressing the impact of autonomy supportive parenting on children's self-esteem, emotional health, and prosociality.

Autonomy and Autonomy Support

Joussemet and colleagues (2005) define autonomy as "feeling as if one is the origin of one's own actions [and] that one has input into determining one's own behaviour" (p. 1216). In other words, autonomy is conceptualized by how much volitional control and freedom an individual feels to create their own choices (Vansteenkiste, 2005). An autonomous perception of the self is built through autonomy-supportive behaviour exhibited by the primary caregivers and determined by the extent to which parents are responsive towards their child and engage in validating behaviours towards their child's thoughts, feelings, and perspectives (Clark & Ladd, 2000). Autonomy support is also communicated by how much parents promote children's initiative-taking and self-expression (Rodríguez-Menéndez et al., 2024).

These factors make up what is considered an autonomy supportive environment in which children are regarded as individually functioning members and are appreciated for their unique perspectives. For example, allowing children to make their own choices in small daily tasks such as dressing themselves up for school or, making their own snack can be characterized as autonomy supportive. Social environments in general, which allow children to lead their own tasks and activities, may also promote autonomy development, such as children leading groups and games in school or, during other extracurricular activities.

Parental Control

The conceptual opposite of autonomy support is parental control (Wong et al., 2022). The concept of parental control can be divided into two subcategories: external control and, internal/psychological control. Wong and colleagues (2022) define external parental control as parenting which intends to coerce children to act in accordance with the caregivers' strict rules through the use of corporal punishment, assertion of power, and threats to remove privileges. In contrast, internal control, which is also sometimes referred to as psychological control, has been described as, "parenting aims to pressurize children to feel, think, or behave in particular ways by appealing to their internal self " (Wong et al., 2023, p. 702). The strategies used by caregivers to evoke internal control are the use of guilt and shaming tactics, belittling the child's feelings and opinions, and the withdrawal of affection. Internal control has been linked to internalizing issues, such as depression and poor emotional regulation as well as reduced prosociality in children and youth across cultures (Rodríguez-Menéndez et al., 2024; Vansteenkiste et al., 2005). Engaging in controlling behaviours limits children's freedom to engage autonomously in their environment and restricts their need for self-determination.

Some level of parental control, however, is necessary for children's adjustment. Behavioural control consists of parents setting reasonable expectations and rules to ensure the development of self-regulation skills and the safety of the child (Harma et al., 2025). Aspects of behavioural control include setting curfews, monitoring children's whereabouts, overseeing children's schoolwork, and providing structure for daily routines. Behavioural control parenting is associated with better adjustment, prosocial skills, high academic success, self-efficacy, and self-regulation in adolescents. Thus, good parenting is not conceptualized as a lack of control, but rather as setting reasonable boundaries that ultimately support children to fulfill their goals and responsibilities.

Self-Determination Theory

According to self-determination theory (SDT), humans have a universal need for competence, relatedness, and autonomy (Deci & Ryan, 2008). SDT posits that the extent to which all three basic needs are met corresponds to individual well-being, intrinsic motivation, goal making, and thriving towards psychological growth (Ryan, 2009). On the contrary, deficits in meeting one's needs for competence, relatedness, and autonomy may lead to issues in self-motivation and symptoms of psychopathology, such as negative self-image and a lack of liveliness or enthusiasm. Moreover, Ryan & Deci (2000) suggest that autonomy is crucial for promoting a natural orientation of internal motivation. Feeling internally motivated to achieve one's goals rather than being extrinsically motivated or compelled by external pressures or coercion requires self-determination, or in other words, feeling self-directed and volitional. Thus, the expression of autonomy is an essential component in endorsing personal growth and promoting mental well-being in children.

Cross-Cultural Application of SDT

Many scholars have questioned SDT's claims about universality, specifically due to the theory's inclusion of autonomy as one of the three basic psychological needs. Criticisms about individual autonomy being a universal need have been made due to the differences in parenting techniques and cultural beliefs between Western and Eastern cultures (Iyengar & Lepper, 1999). Eastern cultures are collectivist and emphasize the importance of individuals conforming to societal standards and forming a dependence on other social actors (Nalipay et al., 2020; Vansteenkiste et al., 2005). The main critique of SDT's inclusion of autonomy is that the notion of independence and promotion of individuality may not translate well in Eastern societies. This is exemplified in a prominent study done by Iyengar and Lepper (1999) in which they found that Asian American children prefer to have choices made for them to maintain group harmony, whereas Anglo-American children made choices as a way to express their independence and individuality. The authors suggest that, due to these results, the need for autonomy may not be universally prominent.

The criticisms directed at SDT's claims about autonomy and independence being a universal need are flawed because SDT does not define autonomy as the need to be independent. Independence is typically seen to be a sense of detachment from other external sources. Rather, SDT conceptualizes autonomy as feeling in control of one's actions on an intraindividual level (Vansteenkiste et al., 2005). Thus, criticisms about the theory's assertion of individualism are unsubstantiated and can be considered as misinterpretations of SDT's claims. Indeed, studies conducted on cross-cultural applications of SDT have been found to support the theory's claims of being universal in both collectivist and individualist cultures (Nalipay et al., 2020). Nalipay and colleagues (2020) found that satisfaction in all three components of SDT (competence, relatedness, and autonomy) promotes academic competence and achievement, and optimal functioning in educational settings for students in five Western societies and six Eastern societies. Furthermore, autonomy support was found to facilitate autonomous motivation and reduce internalizing symptoms such as anxiety and depression, in a sample of Chinese students (Vansteenkiste et al., 2005). Likewise, in a US & East Asian meta-analysis conducted by Yu and colleagues (2018) found support for autonomy support to be a universal need. They also identified autonomy support to promote wellbeing across both Eastern and Western cultural contexts. In a sample of Turkish students, Tunca (2024) reported that autonomy supportive parenting increased adolescents' mental toughness and predicted better social-emotional health outcomes and positive stress perception. Mental toughness is one's ability to remain self-confident even in difficult and, challenging environmental contexts. Whereas positive stress perception is one's belief in their ability to cope in stressful conditions. These findings support the suggestion that meeting autonomy needs delineated in SDT are shown to promote universal well-being across cultures in both Western and Eastern societies. Therefore, SDT can be considered a universal model of needs and can be applied to parenting and

developmental outcomes in both cultural contexts.

Importance of Autonomy Support

Engaging in autonomy supportive parenting has been connected to several components of well-being in children, such as high self-esteem, good emotional health, and prosociality (Joussemet et al., 2014; Froiland, 2015; Rodríguez-Menéndez et al., 2024). These three components minimize the development of internalizing and externalizing symptoms that are characteristic of psychopathology. The American Psychological Association (2018) defines externalizing issues as behaviours that are directed outward into the external world such as, hostility or anger; whereas internalizing behaviours are those that are directed inward within oneself such as, anxiety and depression.

Self-Esteem and Emotional Health

Many studies have shown that autonomy supportive caregiving is related to high self-esteem and emotional well-being in children. Joussemet and colleagues (2014) found that parenting programs specifically tailored to encourage autonomy support decreased externalizing (aggressive and disruptive behaviour) and internalizing symptoms, and promoted positive affect, higher life satisfaction, and higher self-esteem in children. The parenting program specifically aimed to encourage authoritative parenting by focusing on dimensions such as, affiliation, structure, and autonomy support. Highly controlling parenting approaches that provide little opportunity for autonomy, on the other hand, have been shown to undermine children's self-esteem and give rise to internalizing issues such as, symptoms of anxiety and depression (van der Bruggen et al., 2010). Likewise, Froiland (2015) found that engaging in autonomy supportive parenting characterized as, providing rational for rules, expressing empathy, acknowledging children's interests, and using noncontrolling language during daily interactions, promoted internal motivation in children towards completing homework, and expanded children's intellectual experiences. This is because, through autonomous parenting, caregivers aim to evoke internal motivation by making difficult tasks fun and engaging through positive dyadic bonding, in which both the child and parent share a positive interaction, and understanding the child's perspective rather than imposing commands, rules, and expectations upon the child. During autonomous parenting, children also tend to feel more positive emotions and develop positive mentalities towards learning. For example, turning a difficult and frustrating wordsearch into a fun game by providing hints to the child and showing excitement towards their progress and success (Froiland, 2015). Thus, turning a bothersome task into an enjoyable dyadic activity evokes a positive emotional reaction from the child rather than frustration and giving up.

Prosocial Orientation

Parental autonomy support during childhood has been linked to prosocial tendencies in childhood and later in life. A study by Rodríguez-Menéndez and colleagues (2024) found that children with autonomy supportive parents exhibited higher prosocial competence such as, engaging in problem-solving behaviours, and were more likely to behave empathetically towards others. Moreover, Roth (2008) found that in a sample of college students, individuals who reported receiving autonomy supportive parenting during childhood were more likely to engage in helping behaviours to support others' needs. This study indicates that autonomy support has been shown to promote an internal motivation to help others rather than a self-oriented mentality towards helping. Self-oriented helping is when individuals engage in prosocial behaviours to gloat, or to receive appreciation and approval from others. Therefore, having early encouraging and supportive parenting can not only lead to prosociality in childhood, but create a foundation for an internally motivated prosocial orientation which remains stable in adulthood.

Future Directions

Future research should focus on how autonomy-supportive parenting may contribute to the development of children's moral self-

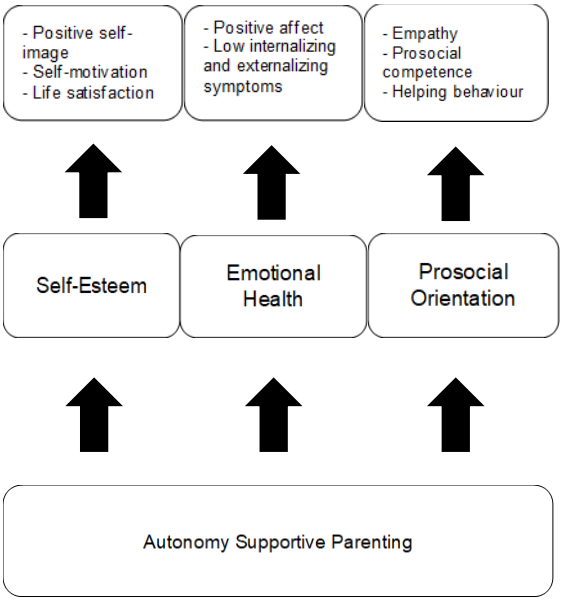
concept. A moral self-concept is the awareness a person has of themselves as being either a moral or immoral agent (Schiele et al., 2025). This self-concept emerges as early as kindergarten and is built by the internalization of one's social environment, such as parenting and cultural norms. Little is known about how specific autonomy supportive parenting practices give rise to moral self-concept formation during mid-childhood and adolescence. It may be valuable to investigate these developmental periods particularly, as these are the times in development in which children may be attempting to seek more autonomy and learn about their individual capacities and their role in the world.

Conclusion

Self-determination theory asserts autonomy as one of three universal needs. Critiques of SDT often misinterpret the definition of autonomy as a need for independence, when in reality SDT suggests autonomy to be a sense of volitional control rather than a need for individualism (Vansteenkiste et al., 2005). The fulfillment of autonomy needs is associated with positive developmental outcomes including, better emotional health and higher self-esteem, and prosociality (e.g., Figure 1). Needs for autonomy can be satisfied by autonomy supportive parenting, which is characterized by being responsive and validating towards the child's feelings and thoughts and providing rationale for rules and expectations (Clark & Ladd, 2000; Joussemet et al., 2005). On the contrary, parenting techniques that limit autonomy and impose excessive control may lead to issues with anxiety and depression (Wong et al., 2023).

Currently, the burden of mental health issues is rising in young people across many parts of the world (McGorry et al., 2025). While there may be a myriad of reasons for why this may be, it is crucial to recognize certain relieving factors that may help mitigate these issues. Autonomy supportive parenting may serve as one vital factor that may attenuate the prevalence of mental health concerns during adolescence and early adulthood. Lastly, the developmental outcomes of autonomy supportive parenting seem to be applicable across cultures in both Eastern and Western societies thus, making autonomy supportive parenting a core tenet in promoting better developmental outcomes for children across cultures.

Figure 1. *Autonomous Parenting and Developmental Outcomes*



Note. Autonomy supportive parenting promotes self-esteem, good emotional health, and prosocial orientation in children. The components of each factor are delineated above.

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Restricting Photographic Evidence in the Courtroom: A Response to Technological and Cognitive Vulnerabilities

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Abstract

Once regarded as an objective form of evidence in criminal trials, photographs are now under growing scrutiny, as digital alteration and psychological biases can mislead jurors and shape their perceptions of guilt or innocence. This paper examines how photographic evidence can distort legal outcomes through implicit, cognitive, and confirmation bias. The use of artificial intelligence (AI)-enhanced images in suspect lineups heightens the risk of misidentification, while the rise of deepfake technology enables the fabrication of evidence for political, legal, or personal agendas. Even without malicious intent, these practices can reinforce systemic flaws and compromise the integrity of the legal process. This paper argues for restricting photographic evidence depicting suspects in criminal trials unless it undergoes expert digital forensic analysis to detect alterations and is submitted exclusively in digital form to preserve metadata and integrity. Implementing these safeguards would strengthen the reliability of photographic evidence while protecting the justice system from technological threats and psychological biases.

Keywords: *Implicit bias, digital forensic analysis, deepfake technology, wrongful convictions.*

Introduction

In the pursuit of justice within criminal trials, the imperative task of maintaining a fair and unbiased legal process is crucial. Among various forms of evidence, photographic evidence demands careful scrutiny due to its susceptibility to biased interpretations and manipulation. This is particularly important considering the subjective nature of interpreting visual information, which can sway perceptions of guilt or innocence.

Bias can influence perception by altering the content of perceptual experiences, shaping beliefs based on past experiences, and determining the beliefs formed in response to perception (Siegel, 2020). Furthermore, courts play a crucial role in shaping perceptions of fair governance, often aligning their agendas and public policy objectives with the preferences of both political elites and the general public. Thus, systemic vulnerabilities within the legal system are often amplified by reliance on photographic evidence, especially when judges, jurors, or law enforcement unknowingly operate under biased assumptions.

Although photographs may appear neutral because they are often perceived as objective

representations of reality, they can still reinforce preexisting narratives and influence how certain issues are perceived in court, thereby affecting the course of a trial (Yates et al., 2005). In the domain of artificial intelligence (AI) and photo editing, current laws inadequately govern the use of image editing software in photo identification procedures. Law enforcement's growing use of these tools to standardize photo lineups increases the risk of misidentification when altering a suspect's photo to match witness descriptions (Drews, 2021). This vulnerability reflects broader weaknesses in legal procedures, where AI-altered photographs may be introduced through routine practices that fail to detect bias.

To reduce the risk of misidentification in eyewitness trials, courts should restrict photographic evidence depicting suspects unless it has undergone expert digital forensic verification to detect any AI alterations or manipulations.

The Influence of Bias and Altered Images

Biases (encompassing implicit, cognitive, confirmation, and contextual bias) exert a profound influence on the legal system. Implicit bias, which stems from unconscious attitudes that shape decision-making, significantly impacts jurors during deliberation (Faigman et al., 2012). This bias may lead to unconscious stereotyping of witnesses and defendants, risking improper assessment based on stereotypes rather than a comprehensive evaluation of their testimony.

As lay individuals without specialized forensic training, jurors are particularly vulnerable to visual cues and may be unintentionally influenced by altered images that reinforce their existing viewpoints or objectives (Feigenson, 2010). This vulnerability connects to the broader impact of visual evidence, which not only shapes emotional responses but also has the potential to cloud juror perception and judgment.

A particular concern involves the preparation of photographs for eyewitness identification. In an effort to create uniformity, law enforcement may edit lineup photos by removing tattoos, altering hairstyles, changing clothing, or adjusting accessories (Drews, 2021). Standard adjustments like cropping, contrast correction, or adding identical markers (e.g., black bars to cover tattoos) across all images are generally accepted within law enforcement protocols to promote consistency across photo lineups.

However, material alterations intended to help a witness focus on facial features can unintentionally increase the risk of misidentification, especially when they align closely with a witness's description of the suspect. These visual adjustments can interact with cognitive biases, such as confidence inflation, where jurors overestimate the reliability of eyewitness identifications (Drews, 2021), and confirmation bias, where lineup administrators' prior knowledge about the suspect can influence how they present or manage the lineup (Artemenko et al., 2025). When photographs are edited in ways that accentuate certain features or mirror the witness's description, these cues can reinforce existing beliefs and distort the identification process.

Although stronger digital chain-of-custody protocols could offer some protection, such measures may not keep pace with the speed of technological change or address the legal system's limited understanding of AI manipulation. Without safeguards against edited photographic evidence, the fairness of eyewitness testimony evaluations cannot be reliably upheld.

Standardization in lineup preparation is intended to reduce bias, yet photo-editing practices introduce inconsistencies that can undermine this goal. The filler-control method, which involves selecting innocent fillers that closely match the eyewitness's description of the suspect, is designed to prevent the suspect from standing out (Quigley-McBride & Wells, 2018).

However, editing practices vary across jurisdictions, and image manipulation software can be used to alter a suspect's photo more extensively than the fillers. For example, while fillers might only receive minor adjustments such as lighting correction, a suspect's image may be altered to remove tattoos, change hairstyles, modify clothing, or adjust accessories. These edits are intended to prevent a suspect with distinctive features (e.g., facial tattoos or scars) from standing out in the lineup,

but they have also been used to modify a suspect's appearance to resemble a witness's description of the perpetrator. Such changes can make the suspect more noticeable and potentially influence an eyewitness's decision (Drews, 2021).

The use of police lineups in eyewitness trials underscores the importance of standardization in eyewitness identification processes. As technology continues to evolve, it is imperative for legal systems to adapt and establish robust measures to prevent the misuse of digital tools, ensuring the reliability and accuracy of evidence presented in courtrooms.

Political and Personal Manipulation via Deepfakes

In the era of advanced technology, increasingly deceptive photographs are created to serve political or propagandistic objectives. Those with harmful intentions may try to exploit the legal system's nuances and loopholes to advance personal agendas or fulfill vindictive goals. This manipulation often involves deepfakes, AI-altered images that convincingly portray individuals engaging in actions they did not commit (Okolie, 2023). Motivated by ideological goals, some individuals or groups create or use images that appear to be credible evidence, even when staged or manipulated. These images are then strategically used to shape public opinion (Morris, 2015).

With the progression of AI, generating fake media involving public figures will become effortless in the next decade, posing significant societal risks. This accessibility means anyone can create fabricated content featuring politicians and share them widely on platforms like Instagram or Facebook. The rapid distribution of such deceptive content online could have unforeseen repercussions, potentially leading to the downfall of political careers or affecting international relations, and even sparking conflict (Pantserev, 2020).

In the courtroom, manipulated images may gain traction when supported by testimony that reflects shared beliefs or biases, regardless of intent. Additionally, courts lack clear procedures for introducing deepfake evidence, and current authentication standards fall short due to their preexistence before the technology emerged (Delfino, 2022). A notable example is the long-standing dispute over a photograph depicting Prince Andrew, Virginia Giuffre, and Ghislaine Maxwell, which has been central to both media narratives and legal proceedings. Despite its repeated use in public discourse, the original file has never been produced, its chain of custody is unverified, and expert opinions remain divided on whether it was staged or altered (Wjst, 2025).

This uncertainty has persisted for more than a decade, allowing the image to shape public perception without definitive authentication. Thus, politicians and legal systems are placed in a difficult position when facing manipulation or extortion cases involving AI-altered photos, as they lack established procedures to address these challenges. With the progression of technology, the widespread use of deceptive photographs in court becomes an increasingly urgent and ongoing threat, especially regarding political manipulation.

In the modern age, abusers can exploit advanced technology to manipulate and control victims, perpetuating cycles of harassment through covert means. In domestic abuse cases, particularly during divorce proceedings or custody battles, offenders may alter images of themselves or their victims to present themselves more favourably or to undermine the victim's credibility.

Such manipulation is often facilitated by images obtained through discreet surveillance, documentation, or acts of intimidation, threats, and harassment (Dodge & Johnstone, 2018). These tactics extend beyond physical harm, with many victims continuing to face pressure before trial through phone calls or text messages from jail, leading up to 80% of them to recant their statements or withdraw from proceedings (Bonomi & Martin, 2021).

To sustain pressure on victims, offenders can send AI-generated photographs that look authentic but are fabricated, convincing the victim that such images could be introduced in court. In cases where the victim's eyewitness account is central to the prosecution, the fear that jurors might believe these false depictions can be enough to deter them from testifying at all (Tarling et al., 2000).

The growing accessibility of deepfake creation, often discussed and even practiced

within online communities, raises particular concern for non-consensual sexual or incriminating images used as threats, blackmail, or abuse (Lucas, 2022). This is especially problematic in trials that rely heavily on eyewitness testimony, as jurors often place significant weight on photographic evidence, which can heighten the perceived truthfulness of statements and enhance the credibility of witnesses (Derksen et al., 2020; O'Neill Shermer et al., 2011).

Restricting the admission of unverified photographic evidence depicting suspects, unless authenticated through expert digital forensic analysis, would remove one of the most effective tools abusers could use to threaten victims. By eliminating the risk that manipulated images could be presented in court, victims may feel more confident that a verdict will be based on credible evidence, making them more willing to proceed to trial and less vulnerable to intimidation.

Legal Framework and Authentication Challenges

The debate over whether to restrict photographic evidence in court requires a closer examination of its specific role in the legal process. Unlike DNA or fingerprints, which typically establish that a person was present at a scene, photographs can document injuries, depict the condition of physical evidence, or capture identifying features such as clothing, tattoos, or facial expressions that may be relevant to witness descriptions (Birngruber et al., 2020). In Canadian courts, photographs are frequently introduced in cases involving use of force, physical assault, or suspect identification, where they often serve as primary corroborative evidence rather than supplementary support (Carter, 2010; Porter, 2011).

Photographs can convey specific and immediate forms of information that cannot always be replicated through scientific testing or verbal testimony (Feigenson, 2010). In identification cases, mugshots, lineup photos, and surveillance stills are routinely admitted to support eyewitness accounts, sometimes forming the backbone of the Crown's case when no physical evidence is available (Porter, 2011).

However, the very qualities that make photographic evidence persuasive also make it vulnerable to bias and technological manipulation. Jurors may interpret images as inherently objective and truthful, even when they are selectively framed or subtly altered (Porter, 2011). In a legal environment where photographs often carry decisive weight, the risk of misuse is especially concerning. This paper does not argue for eliminating photographic evidence from courtrooms altogether, but rather for imposing safeguards in high-stakes identification procedures where its susceptibility to distortion poses the greatest risk.

In Canadian courts, photographs are admitted into evidence when they are shown to be accurate and relevant to the case (Carter, 2010). A photograph is usually introduced through a witness who can confirm that it fairly represents the subject as they appeared at the time it was taken. This witness is often the person who captured the image or someone who was present when it was taken.

If the authenticity of a photograph is challenged, courts may require additional evidence to prove that the image is a true and accurate representation of what it claims to show. This often involves testimony from the individual who created or stored the record, or from someone who is familiar with the system that produced it, to confirm that the process was reliable (Chasse, 2010).

In cases involving digital photographs, this process could include testimony from the photographer, input from a qualified digital forensics expert, and an examination of system logs or metadata to determine whether any changes have been made. These steps ensure that the party submitting the evidence can establish its authenticity to the civil standard of proof, which is based on a balance of probabilities, before the court allows it to be admitted (Chasse, 2010).

While current procedures aim to promote reliability, they depend largely on human testimony and basic technical checks, which are not always capable of detecting advanced digital alterations (Carter, 2010). As image-editing tools become more accessible and sophisticated, this limitation poses a growing challenge for the legal system.

Given the weight that photographs carry in court proceedings, specialized digital forensic analysis should be a standard part of the authentication process. Digital forensic experts are trained to identify, collect, preserve, and analyze data using repeatable, scientifically validated methods that meet admissibility standards (Miller et al., 2022). In the case of photographic evidence, they can review image metadata (information about the image), verify file integrity, and detect any signs of manipulation with a level of precision that traditional methods cannot match.

The value of expert testimony extends beyond the technical analysis itself. One of the most persistent challenges in court is presenting complex digital evidence in a way that is both accurate and understandable. Trials often face authentication disputes, particularly when highly technical image analysis is involved (Miller, 2023). Legal experience alone does not guarantee the ability to assess the reliability of photographic evidence, and even experienced legal professionals can misjudge its accuracy without specialized guidance (Wahlberg & Dahlman, 2021).

To make this process as effective as possible, photographic evidence should be submitted exclusively in digital form. Digital files preserve a complete record of an image's history, including any edits, and allow forensic experts to conduct detailed analyses that cannot be replicated with printed copies. Standardizing this requirement would give courts access to the most reliable version of the evidence and ensure that it has been thoroughly examined before being admitted.

Conclusion

Exploring the challenges surrounding photographic evidence in the criminal justice system highlights the need for a careful reassessment of how such material is handled. The accessibility of deepfake creation, requiring minimal technical skill or equipment, allows virtually anyone to produce and distribute AI-altered photos (Karnouskos, 2020).

Combined with inherent biases and the tendency for judges and jurors to overestimate the objectivity of photographs, these risks underscore the need to reform current authentication practices. This approach calls for a more nuanced and equitable legal system that recognizes the limitations of photographic evidence and embraces alternative options.

Strengthening authentication practices by integrating specialized digital forensic expertise and requiring photographs to be submitted in digital format would help ensure that courts work with the most reliable version of the evidence. The goal is not to remove photographic evidence from trials entirely, but to acknowledge its vulnerabilities and implement measures that address both technological threats and cognitive biases.

Adopting this approach would enhance the fairness and credibility of court proceedings, enabling judges and jurors to make more informed decisions while protecting the justice system from the growing threat of falsification in the digital age. The debate over photographic evidence restriction extends beyond the courtroom, urging society to reevaluate the fundamental mechanisms of justice to ensure fairness, credibility, and protection against manipulation.

In this evolving judicial landscape, the pursuit of justice requires a thoughtful reassessment and a commitment to a balanced and inclusive approach that can withstand the complexities of the modern era.

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Beyond Dichotomies: A New Cultural Continuum for Understanding Prosocial Behaviour

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Abstract

Because prosocial behaviour is considered a universal human trait that emerges as early as 18 months of age (Warneken & Tomasello, 2006), it appears across diverse cultures. Traditional frameworks often explain these variations using the individualistic-Western versus collectivistic-Eastern dichotomy. However, such binary classifications overlook the complex interplay of cultural norms, social structures, and trust systems that shape prosociality. This paper primarily focuses on South Korea and Japan, two East Asian societies that exhibit both strong collectivist and individualist tendencies and compares them with Western societies such as Canada and the United States. Drawing on Yao and colleagues' (2017) tripartite model of dignity, face, and honour cultures and Baldassarri's (2009) distinction between generalized and institutional trust, this paper proposes a new continuum between cultural coherence and cultural diversity. At one end, prosociality emerges through communal norms, emotional bonds, and homogeneity; at the other, it arises from institutional trust, inclusion, universal norms, and pluralistic solidarity. This framework enables a more nuanced understanding of culturally specific expressions of prosocial behaviour. It also provides a novel lens through which the divergent forms of individualism and collectivism across East Asia and Western contexts can be reinterpreted.

Keywords: *individualism, collectivism, prosocial behaviour, cultural psychology, East Asian societies, coherence–diversity continuum, trust systems.*

Introduction

Prosocial behaviour is commonly defined as voluntary actions intended to benefit others, such as helping, sharing, and cooperating (Eisenberg & Mussen, 1989). While prosocial behaviour is often regarded as a universal trait, cross-cultural studies have typically framed Western societies as individualistic and Eastern ones as collectivistic. According to Triandis (1989), individualism prioritizes personal goals and self-reliance, whereas collectivism emphasizes group cohesion and shared responsibility. These value orientations shape not only identity but also how prosocial behaviour is expressed across cultures.

However, such dichotomous framings often oversimplify the complex dynamics of individualism and collectivism and overlook the unique social and cultural sources from which these belief systems emerge. Japan and South Korea show relatively strong individualistic tendencies among Eastern cultures, as they report the highest individualism scores among Eastern societies in cross-national comparisons (The Culture Factor Group, n.d.).

While China is commonly included in discussions of East Asian cultures, this paper limits its focus to Japan and South Korea in order to provide a more in-depth analysis of how individualism and collectivism manifest in these two distinct societies. According to the cultural comparison tool offered by The Culture Factor Group (n.d.), Japan scores 62 and South Korea scores 58 on individualism—figures that are comparable to the United States' score of 60. These statistics challenge the conventional view that Japan and South Korea are uniformly collectivist and suggest that their expressions of individualism and collectivism differ significantly from those typically associated with Western societies.

For a more in-depth understanding of this discrepancy, it is necessary to move beyond the new and flexible definition of prosocial behaviour, which can manifest in different ways across different cultures. According to Baldassarri and Abascal (2020), prosocial behaviour arises not merely from altruism but from institutional systems that foster trust and shared goals. Their framework helps explain why expressions of prosociality differ between homogeneous societies, such as those in Korea and Japan, which have limited diversity in terms of ethnicity and language, and heterogeneous ones, which have a multicultural aspect, like those in North America.

In homogeneous communities, prosocial behaviours often emerge from shared norms, interpersonal interactions, and strong peer influence. In contrast, heterogeneous communities require individuals' voluntary choice based on universal norms for trust and cooperation, as people interact more frequently with strangers across cultural or ethnic lines (Baldassarri & Abascal, 2020). This suggests that explaining prosocial behaviour solely in terms of individualistic or collectivistic tendencies is overly simplistic, as such behaviours can manifest in diverse ways across different cultural contexts.

For instance, Western (especially North American) individualism is often agentic in nature, emphasizing autonomy and self-direction. In contrast, South Korea reflects characteristics of competitive individualism, while Japan leans toward a relationally distant form of individualism. Similarly, collectivism also takes different shapes: in Korea and Japan, it is often rooted in social pressure to maintain harmony, whereas in Western societies it manifests more as the public sphere where private individuals come together as a collective public, supported by high levels of social trust (Habermas, 1991).

Consequently, cross-cultural research must move beyond binary distinctions and instead adopt frameworks that reflect deeper cultural orientations. This paper proposes that a more productive lens for understanding the development of prosocial behaviour lies not in the traditional individualism–collectivism dichotomy. Instead, it situates prosocial behaviour within a broader continuum between cultural coherence—where prosociality emerges through emotional and communal bonds, and cultural diversity—where it is driven by institutional trust, rights-based norms, and inclusive solidarity.

By employing this alternative framing, the paper aims to offer a more culturally grounded explanation of prosocial behaviour across cultures.

Analysis

Criteria Distinguishing Individualism and Collectivism

Many socio-psychological studies have taken a binary approach in categorizing societies as either individualistic or collectivistic, and Hofstede (1980) was one of the pioneers to propose cultural dimensions based on this framework. In his work, individualism was measured based on how individuals construct their sense of self, make autonomous decisions, and perceive their sense of belonging within a community (Hofstede, 1980).

According to these criteria, Japan scored 48, indicating a moderately individualistic society; South Korea scored 18, suggesting a highly collectivistic orientation; and the United States scored 98 out of 100, reflecting a strongly individualistic culture (Hofstede, 1980). Although this study is relatively old, its influence remains substantial, and its framework continues to be widely adopted across various fields. As a result, Hofstede's cultural dimensions (particularly the individualism-collectivism dichotomy) have often become a fixed lens through which cultural behaviour is interpreted, which may hinder more context-sensitive interpretations.

Building on Hofstede's binary approach, Triandis (1989) argued that people in collectivist societies are more likely to engage in prosocial behaviours because they are motivated to make a good impression on in-group members by adjusting their public self. However, Yamagishi and Kiyonari (2000) complicated this view by showing that prosocial behaviour tends to decline toward out-group members in collectivist societies, often becoming restricted to in-group contexts.

Furthermore, although North American countries ranked high in the individualism index, they often exhibit prosocial behaviours toward strangers. According to the World Giving Index (Charities Aid Foundation, 2021), Western countries such as the United States and Canada reported significantly higher rates of prosocial behaviours (particularly donating to charities and helping strangers) compared to East Asian countries like Japan and South Korea. While around 60% of Americans reported donating money in the past month, only 18% of Japanese respondents made the same report.

These findings challenge the assumption that cultural value orientations (whether individualistic or collectivistic) directly predict social behaviours, but rather, they may be shaped by more nuanced and contextual factors, such as the trust system. For example, Irwin (2009) suggests a trust-based typology that offers a conceptual alternative, highlighting that prosocial behaviours are not determined by the dichotomous individualism-collectivism frame, but rather by the direction of people's trust.

He argues that people in collectivist societies perform prosocial behaviours through generalized trust, the belief that most others in their group are trustworthy. In contrast, people in individualistic societies exhibit prosocial behaviours through institutional trust, which is more about a structural belief that systems are in place to ensure people behave appropriately (Irwin, 2009).

By focusing on trust dynamics, this study highlights the potential for more effective, culturally responsive measures of prosocial behaviour, offering a more context-sensitive and adaptable framework than the traditional individualism–collectivism dichotomy.

Individualism in South Korea, Japan, and Western Culture

Although South Korea, Japan, and Western countries (especially the USA and Canada) exhibit individualistic aspects, their characteristics differ significantly.

In the case of Korea, individualism carries a distinctly competitive nature. Although traditionally considered a strongly collectivist society, Korea has undergone rapid individualization due to Westernization in its economy, politics, and social values, largely driven by the country's exponential development over the past few decades (Cho et al., 2010). In this process, Korean youth are required to internalize bicultural competence and adopt individualistic values, as success in academic environments and job markets increasingly depends on personal competence, achievement, and autonomy (Cho et al., 2010). Therefore, individualism in Korean society appears to stem more from a need to adapt to competitive environments than from the organic development of personal autonomy. This form of individualism, when intensified, may inhibit the growth of prosocial behaviour among Korean youth. According to The Korea Herald, the intense pressure and stress of South Korea's hyper-competitive society have left many individuals struggling to cope, as they constantly compare themselves to others based on implicit societal standards of success (Park, 2024).

Second, individualism in Japan tends to take the form of relationally distant individualism.

Takahashi and colleagues (2002) found that, compared to Americans, Japanese individuals tend to avoid imposing on others, even in close relationships, as maintaining relational distance is considered a fundamental social norm for social harmony. These behaviours are more unusual in the USA. Extending this perspective, Ogihara and colleagues (2014) demonstrated that Japanese people perceive individualism as an ambivalent concept, associating it with both positive qualities, such as independence, and negative aspects, including a lack of interpersonal connectedness. These studies suggest that individualism in Japan differs from the Western norm, as it is expressed less through personal autonomy and more through relational distance and a cultural appreciation for solitude.

Third, Western individualism is more likely to exhibit agentic characteristics. Americans tend to emphasize personal autonomy and independence, rather than viewing the self as embedded within a community (Takahashi et al., 2002). In these cultures, personal behaviours and choices are generally seen as the individual's responsibility, with a strong focus on achieving personal goals and self-reliance (Cho et al., 2010).

These findings suggest that the sources of individualistic tendencies differ significantly between Western and East Asian cultures. In countries like South Korea and Japan, individualism often emerges in response to external conditions, such as honour-based competitive environments or the need to maintain social harmony and face (Yao et al., 2017). In contrast, Western individualism is more deeply rooted in the intrinsic value of the self, emphasizing personal autonomy, self-expression, and individual rights as foundational principles.

As a result, although all three cultures may exhibit traits classified as "individualism," the underlying motivations and forms of expression differ considerably. This suggests that both the categorization and methodological approaches in cross-cultural research must go beyond simplistic labeling to capture the nuanced cultural dynamics involved.

Collectivism in East Asian and Western Cultures

Just as individualism manifests differently across the three cultures, collectivism also takes distinct forms. According to Hofstede (2011), in collectivist cultures like South Korea and Japan, individuals have a strong in-group bond, and this sense of belonging tends to require loyalty to that group. In these societies, individuals are more likely to categorize others as members of the in-group or the out-group rather than as individuals.

Hofstede (2011) argues that people in collectivist cultures exhibit more prosocial or reciprocal behaviours toward in-group members, but behaviours toward out-group members tend to be limited or cautious. This discrepancy does not merely reflect favouritism toward the in-group but stems from a system of generalized reciprocity and depersonalized trust, grounded in communal norms and social harmony (Yamagishi & Kiyonari, 2000).

For example, a study has shown that people in collectivist societies were more likely to wear a mask than those in Western, individualistic societies during COVID-19. According to Chung and colleagues (2022), Koreans' strong collectivistic tendencies, particularly their concern about infecting others and the cultural emphasis on non-maleficence (avoiding causing harm or trouble to others), significantly contributed to higher mask compliance compared to Western individualistic cultures. This behaviour was often driven by a voluntary desire to protect their in-group rather than external pressure.

On the other hand, the form of collectivism in Western cultures differs from the ingroup-oriented collectivism observed in South Korea and Japan. While Western societies are often conceptualized as individualistic, people in these cultures tend to exhibit more prosocial behaviour toward strangers than those in East Asian societies, where individuals are generally more vigilant toward out-group members.

In Western contexts, collectivistic tendencies are more prominent in the public sphere than in familial or close-knit relationships. Habermas (1991) illustrates this through the example of coffee houses, which served as critical public spaces where individuals from various social

strata engaged in rational discourse. These settings reflect a form of public sphere collectivism, rooted not in familial or communal obligation but in social trust and shared engagement in public discussion.

Hofstede (2011) also argues that in individualistic Western societies, expressions of collectivism often take the form of volunteering and charitable activities which are agent-based prosocial behaviours driven by individual initiative rather than direct in-group obligations. These findings offer insight into the expression and roots of Western collectivism.

It is more often manifested through voluntary or public-interest activities, driven by individuals' spontaneous motivation toward pluralistic solidarity—a collective alignment rooted in shared ideals rather than kinship ties. Miller's article (2020) clearly demonstrates this by illustrating the protest culture in the USA, as seen in the participation of various racial groups in the Black Lives Matter movement.

The article revealed how individuals from diverse racial and social backgrounds, in a predominantly individualistic culture, engaged in protests and supported one another, highlighting a form of pluralistic solidarity where prosocial behaviour extended beyond one's in-group in pursuit of shared justice and values. This stands in sharp contrast to collectivism in South Korea and Japan, which is primarily shaped by social pressure and the need to maintain harmony.

Different Aspects of Collectivism Between Korea and Japan

However, although Korea and Japan are categorized as collectivist societies, like those across Asia, the expression of their collectivistic traits differs. In the case of South Korea, collectivism tends to be vertical, grounded in strong obligations to the family, a sense of sacrifice for the group, and deference to authority, rather than equality among group members. This deeply embedded hierarchical structure has not only shaped collectivist values but has also contributed to the development of a culturally distinct form of vertical individualism in Korean society (Suh, 2007).

Therefore, collectivism in South Korea tends to place greater emphasis on joint responsibility, in-group orientation, and a sense of communal duty. While maintaining social order and harmony are also important, these aspects appear to be somewhat less central compared to Japan, a neighbouring country within the same East Asian region.

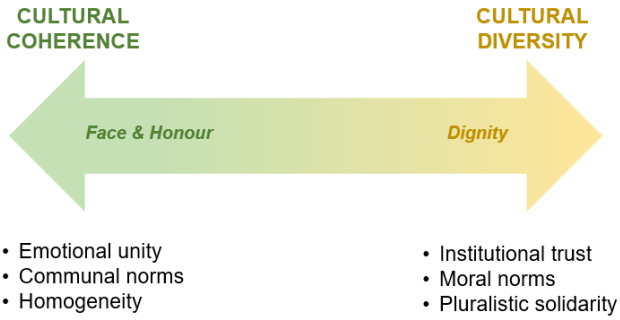
Collectivism in Japan tends to be more situational, passive, and accommodating, as Japanese individuals prioritize social harmony and face-saving over directly resolving conflicts—an approach that contrasts with the more confrontational tendencies observed in South Korea (Miyahara et al., 1998). Although the degree of difference between the two cultures may seem subtle, it leads to strikingly different outcomes, even in their political attitudes.

Lee (2008) examined the political cultures of Japan and South Korea and found that, compared to Korean citizens, Japanese citizens report a higher perception of electoral fairness, less dissatisfaction with the responsiveness of their representatives, and a greater proportion of party preference. However, the higher levels of dissatisfaction and resistance toward their political situations among Korean citizens are more closely tied to the unique characteristics of Korean collectivism.

According to Aleman (2005), the notably high levels of political activity among Korean citizens, such as protests and labour movements, are not merely expressions of discontent but reflect a strong sense of democratic engagement and communal responsibility. Such collective political actions can also be understood as a form of prosocial behaviour, as they involve individuals acting to protect or improve societal well-being, often at personal cost, and are motivated by a shared sense of responsibility.

These findings suggest that while East Asian societies are often broadly categorized as collectivistic, the internal dynamics and cultural nuances within each society can lead to profoundly different outcomes under the same conceptual umbrella. Korean collectivism emphasizes communal responsibility and obligation, whereas Japanese collectivism is more oriented toward preserving interpersonal harmony.

Figure 1. *Continuum Between Cultural Coherence and Cultural Diversity*



Note. This figure synthesizes concepts from Yao and colleagues (2017) on dignity, face, and honour cultures, and Irwin (2009) on institutional and generalized trust. Examples for each category: Emotional unity (e.g., candlelight vigils in South Korea), Communal norms (e.g., filial piety in East Asian societies), Homogeneity (e.g., ethnic uniformity in Asian societies), Institutional trust (e.g., reliance on judiciary systems in Canada), Moral norms (including inclusive norms that promote diversity and non-discrimination; e.g., human rights legislation in Western Europe), Pluralistic solidarity (e.g., multicultural volunteer networks in the United States).

Figure 1 illustrates the proposed continuum between cultural coherence and cultural diversity. The left end, cultural coherence, emphasizes emotional unity, communal norms, and homogeneity, aligning with face and honour cultures grounded in generalized trust. The right end, cultural diversity, emphasizes institutional trust, inclusive moral norms, and pluralistic solidarity, reflecting dignity cultures. This framework integrates Yao and colleagues (2017) tripartite model with Irwin's (2009) trust distinction, providing a lens for examining both broad contrasts and subtle differences among cultures along the same spectrum. The following discussion elaborates on how this continuum can be applied to interpret variations in prosocial behaviour across different cultural contexts.

Discussion

Classical frameworks that dichotomize cultures into individualistic versus collectivistic orientations offer limited explanatory power, especially in increasingly hybrid or transitional societies such as South Korea. These binary models risk oversimplifying complex social behaviours by reducing them to static traits, overlooking the interaction between internal motivations (e.g., trust, obligation, harmony) and external structural factors (e.g., competition, hierarchy, pluralism) that shape prosociality.

To address these limitations, this paper proposes a continuum between cultural coherence and cultural diversity. As illustrated in Figure 1, at one end of this continuum, prosocial behaviour is rooted in emotional unity, communal norms, and cultural homogeneity. At the other end, it is driven by institutional trust, universal norms, and voluntary solidarity across differences.

This perspective aligns with the tripartite cultural framework proposed by Yao and colleagues (2017), which moves beyond the traditional East–West dichotomy by distinguishing between dignity, face, and honour cultures. In dignity cultures, commonly associated with Western individualism, moral autonomy, and the inherent worth of the individual are emphasized. In contrast, face and honour cultures, prevalent in Eastern societies, prioritize relational interdependence, the maintenance of social harmony, and the reputation (Yao et al., 2017).

These cultural orientations can be further contextualized within Irwin's (2009) distinction between institutional trust and generalized trust as foundations for prosociality, which consequently supports the proposed continuum. Individuals who rely on institutional trust are more likely to endorse formal systems and tend to foster dignity cultures where each individual is seen as inherently valuable and morally autonomous, regardless of group affiliation.

Consequently, such values support cultural diversity, allowing for pluralistic solidarity based on inclusive moral norms.

Conversely, those grounded in generalized trust tend to uphold shared experience and in-group connection. They foster face and honour cultures, where maintaining relational harmony, mutual respect, and social standing is crucial. In turn, these dynamics contribute to cultural coherence, a state rooted in communal norms and homogeneity, where prosocial behaviours are most salient within their bounded groups.

This continuum can also explain subtle differences among cultures that lie along the same spectrum. For instance, the differing styles of political expression in Korea and Japan may stem from their placement along the face-honour dimension of the coherence continuum. Japanese people tend to rely heavily on face culture, which leads them to avoid expressing dissatisfaction or conflict. In contrast, Korean people place greater importance on communal honour and a sense of responsibility than on saving face, even though both cultures lie within the same coherence continuum.

By situating prosocial behaviour along a continuum rather than within a binary framework, this model offers a more flexible and culturally sensitive tool for cross-cultural research. It enables scholars to interpret behavioural patterns not as fixed traits but as context-dependent expressions shaped by trust systems and moral orientations.

Conclusion

This paper challenges the adequacy of what has come to be known as the traditional individualism–collectivism dichotomy as an explanation for cross-cultural prosocial behaviour. It proposes a continuum ranging from cultural coherence to cultural diversity. It offers a culturally grounded alternative that integrates emotional and structural drivers of prosociality. This continuum also helps clarify the different expressions of individualism and collectivism in societies such as South Korea, Japan, and Western countries.

In South Korea, collectivism tends to be group-oriented and emotionally expressive, rooted in communal responsibility and a shared reputation. These traits more aligned with an honour culture. In Japan, collectivism leans toward relational avoidance and harmony maintenance, with a strong emphasis on face culture and restraint. Despite both countries being culturally cohesive, their expressions of collectivism differ meaningfully.

In contrast, Western societies, particularly in North America, exhibit an agentic form of individualism anchored in dignity culture, where prosociality often emerges through voluntary participation in universal causes such as protest movements or charitable acts, grounded in institutional trust and pluralistic norms.

Nonetheless, one limitation of this analysis lies in its lack of detailed examination of the internal variations within the cultural coherence end of the continuum, specifically, the divergent orientations of face and honour cultures. While both emphasize collectivism and social harmony, their strategies for maintaining it differ significantly. Face cultures value conflict avoidance, whereas honour cultures value assertive responsibility.

Future research could further examine these nuances to better understand how culturally coherent societies manage solidarity, boundaries, and social regulation; it could also use this framework as a diagnostic tool for interpreting prosocial behaviour in multicultural settings, policy design, and intercultural communication.

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Coming Together After Conflict: Power-Based Differences in Reconciliation

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Abstract

When resolving conflicts, the process of reconciliation must occur for groups to effectively move forward together. However, treating groups as equals can undermine attempts to reconcile. This paper examines how differences in power affect the role of groups within reconciliation, as well as how they may react to reconciliation attempts. Differences in power can be nuanced and can lead to both groups to view themselves as victimized. However, advantaged and disadvantaged groups react differently to different reconciliation attempts. Advantaged groups tend to benefit from recognizing both groups as members of a larger category, acknowledging that both groups are victims, and being seen as moral. Disadvantaged groups on the other hand tend to recognize both groups as connected but distinct, feel overlooked by statements that both groups are victims, and seek an increase in power. Furthermore, while both advantaged and disadvantaged groups feel more motivated to reconcile when made to feel positive emotions such as hope and empathy, negative emotions such as guilt or shame can also motivate advantaged groups to reconcile. However, reconciliation efforts can be hindered when groups do not believe that they will be effective, a belief that may be higher in disadvantaged groups. Overall, a critical analysis demonstrates that power differences are tied to the effectiveness of certain reconciliation strategies, indicating the importance of recognizing group differences when promoting reconciliation.

Keywords: *reconciliation, intergroup relations.*

Introduction

Reconciliation rarely begins with equality. It is a continual process of reinstating positive relationships between groups and occurs after or at the end of a period of conflict (Kelman, 2008). While it would be ideal to reconcile groups' attitudes towards each other when both groups have reached a state of equality, Little (2017) argues that this is uncommon and that reconciliation most commonly occurs in situations of imbalanced power. One of the purposes of reconciliation is to resolve this equality gap (Spear, 2008), but when the gap is particularly extreme, it can hinder attempts to reconcile. As such, it is necessary to understand

how asymmetrical power differences can influence how groups will react to reconciliation attempts and cater reconciliation efforts to each distinct group. This paper consolidates the literature on asymmetrical power differences resulting in different reactions to reconciliation efforts. There are numerous factors in which this can be seen. This paper will discuss three: identities, needs, and beliefs. Across factors, research demonstrates that advantaged and disadvantaged groups respond differently to reconciliation attempts (e.g., Dovidio et al., 2000; Kahalon et al., 2021). It is particularly important to recognize this and adjust reconciliation strategies accordingly, as not considering group differences can result in the perpetuation of inequality, as well as one or both groups not wanting to reconcile.

To illustrate how asymmetrical power differences can impact reconciliation, the Isreal-Palestine conflict can be examined. Theissen and Darweish (2018) have highlighted that Israel-Palestine relations are notable for being resistant to reconciliation methods that have been shown to work in other contexts, such as Northern Ireland. This is in part due to the ongoing nature of the conflict and lack of acknowledgement of the difference in power between the two sides. While power asymmetry still exists in Northern Ireland, the period of violence referred to as The Troubles has resolved (Cohrs et al., 2015), a marked difference from the tensions in Israel and Palestine. Though both groups are involved in the violent conflict, treating the two as equals misrepresents the present circumstances because Israel holds more structural power than Palestine (Theissen & Darweish, 2018). The authors shared Palestinian and Israeli participants' experiences of attending peaceful, equality-based activities with each other, noting that Palestinians had to undergo intense and distressing border security checks before and after they arrived. This makes the reconciliation activities traumatic to one side, while the other side benefits.

Asymmetrical Conflict

In order to reckon with the effects of unequal power dynamics in intergroup reconciliation, it is necessary to examine how these unequal relationships may appear. Unequal power is most frequently understood as concerning a perpetrator and a victim, where one group has done something to directly harm the other (Shnabel & Nadler, 2010). The Holocaust is often looked at in perpetrator-victim research because the overwhelming majority of people recognize the Nazis as clear perpetrators who unilaterally inflicted severe harm on outgroups (Shnabel & Nadler, 2010; Shnabel et al., 2009). The perpetrator-victim dynamic is significant for reconciliation research as it describes markedly different groups, who are expected to behave in markedly different ways.

However, in many scenarios, the perpetrator-victim relationship is less unilateral, with both sides taking harmful action against each other in perpetrator-perpetrator relationships. Victim groups may harm the perpetrator in retaliation, or two groups may harm each other equally. These more complicated dynamics are perhaps better reflected by the level of systemic power each group has. For example, The Black Panther Party, an American militant Black power organization that operated in the 1960s and 1970s, can help illustrate this dynamic. While it is true that the Black Panthers committed violent acts against the (primarily White) police, it was the White police who had the systematic power supporting their own violent actions (Pope & Flanigan, 2013). An asymmetrical power dynamic with both sides harming each other can complicate the reconciliation process, as without a clear separation between perpetrator and victim, it may be hard to predict how groups will react. Some groups are willing to acknowledge their responsibility in a conflict, while others reject it (Solomon & Martin, 2019). At times, the structural power differences are overlooked (especially by those who are advantaged), and groups may be perceived as equal aggressors.

Lastly, another relational dynamic that affects conflict is that of the majority and the minority. Majority-minority dynamics are unique in that they may be guided by more indirect harm, rather than overt efforts at perpetrating harm (Dovidio et al., 2008). While powerful majority groups sometimes have a history of harm against minority groups, Dovidio and colleagues (2008) highlight that majority-minority dynamics may not be

perceived as conflicts, despite significant structural imbalances and negative intergroup relationships. Members of the majority group may view direct harm as an issue of the past and therefore believe it is not their responsibility to reconcile (Bilali & Vollhardt, 2019; Blatz & Philpot, 2008). Overall, the group dynamics relevant to reconciliation relate to differences in their levels of power, but there are nuances to how the asymmetrical power manifests.

Construction of Group Identities

How a group identifies itself and relates to the conflicting group is crucial in the process of reconciliation. While there are countless dimensions on which a group may construct its identity, the way groups' identities are constructed in relationship to other groups is important to understanding how they may reconcile. Groups can be viewed as disconnected and separate, but reconciliation research has emphasized connectedness (Dovidio et al., 2000).

In particular, groups can sometimes be better understood as subgroups within a larger connected group, called a superordinate category (Dovidio et al., 2008). For example, both Black and White Americans (subgroups) share an identity as Americans (a superordinate category). Furthermore, groups may construct identities as "victims" or as "perpetrators," which will influence how they approach reconciliation. Asymmetrical power influences both identity inclusion (i.e., whether a group will identify with a larger superordinate category) and victimhood as identity (i.e., who a group identifies as victims).

Identity Inclusion

While focusing on a superordinate group identity has been presented as a way of bringing groups together (Čehajić-Clancy et al., 2016; Wohl & Branscombe, 2005), research has shown that superordinate group identification is not as helpful for disadvantaged groups (Dovidio et al., 2008). Dovidio and colleagues (2008) suggested that taking on the superordinate identity can cause disadvantaged minority group members to undervalue their own subgroup identities, and care less about injustice against them. Disadvantaged group members who recognize this dilemma are likely to resist a shared identity, as well as reconciliation efforts that utilize superordinate identity perspectives (Dovidio et al., 2008; Fiske, 1993). Furthermore, the prototype of the superordinate group can hinder minorities' identification with superordinate identities, as superordinate groups are often conflated with the majority (Dovidio et al., 2008). For example, while people of any ethnicity can be Canadian, some individuals may default to imagining "a Canadian" as White. This could lead people who are not White to identify less strongly as "a Canadian," as they do not feel it accurately represents them.

To reconcile this relational issue, Dovidio and colleagues (2000) proposed the "same team" framing. The same team framing conceptualizes an intergroup relationship as two distinct groups that are subcategories of a related larger group. This can also be conceptualized as a dual identity—the ability to hold both the superordinate and the subgroup identities at the same time—rather than having the superordinate identity take dominance (Dovidio et al., 2000). Indeed, Dovidio and colleagues (2000) found that the type of group identification had opposite effects on intergroup attitudes. In a correlational survey of White and Black American university students, they found that Black students who endorsed dual identity views felt more positively about intergroup contact, while White students felt more positively when they maintained a superordinate view of groups. Following these findings, Dovidio and colleagues (2008) suggested that superordinate identity interventions motivate advantaged group members to reconcile, while maintaining dual identities promotes reconciliation efforts in disadvantaged group members. They proposed this can be handled by differentiating reconciliation tactics in order to address both groups' needs. Rather than encouraging superordinate identification for all, groups can be separately encouraged to think of the outgroup more positively, using the framework that is most suitable.

Victimhood as an Identity

In addition to subgroups and superordinate groups, how groups identify with victimhood is

important to reconciliation. Groups seek victim identities for both instrumental and psychologically defensive reasons (Kahalon et al., 2021; Solomon & Martin, 2019). On an instrumental level, establishing one's group as the victims in an intergroup conflict presents one's group as deserving of compensation, such as improved legal standing (Solomon & Martin, 2019). Groups may also want to establish victimhood to benefit their own psychological standing, as victims are typically seen as the moral side of a conflict (Kahalon et al., 2021).

Frequently, this establishment of victimhood also extends beyond the mere label of the ingroup as victims, because victimhood indicates the existence of a victimizer. Thus, groups can become focused on establishing that they are the legitimate victims and another group is their victimizer. The term competitive victimhood is used describe the behaviour and attitude of groups trying to establish that they have suffered more (or with less cause) than the outgroup (Solomon & Martin, 2019). Victim groups are more likely to engage in competitive victimization (Kahalon et al., 2021), but often both groups compete to establish victimhood (Solomon & Marton, 2019). In situations where asymmetrical power is present between groups, perpetrator groups or structurally advantaged groups may suffer less harm than the disadvantaged group but still assert that they are the true victims.

There are mixed findings on whether advantaged or disadvantaged groups are more likely to be competitive. Solomon and Martin (2019) highlight that some perpetrator groups that engage in competitive victimhood acknowledge harmful perpetrator actions with the condition that these actions are not reflective of the group. For example, Blue Lives Matter advocates argue that police brutality exists only as a result of a few "bad apples." Rejecting their group's responsibility for harm can hinder reconciliation (Blatz & Philpot, 2010). Conversely, a study by Goldberg and Kupermintz (2017) suggests that minority groups are less likely to publicly accept responsibility for conflict even when they believe it privately, because their admission of fault may be perceived as legitimizing their lower status.

To reconcile victim competition and bring groups together, some scholars call for inclusive victimhood, which involves both groups mutually recognizing each other's victimization (Hameiri & Nadler, 2017; Shnabel et al., 2013; Solomon & Martin, 2019), but the effectiveness may depend on how asymmetrical the group inequalities are. Groups with lower structural power are less likely to be open to inclusive victimhood and are more selective towards which groups they include. This was demonstrated by Cohrs and colleagues (2015), who found that Catholic/Nationalist/ Republicans in Northern Ireland were more likely to view other groups as victims if they shared a victimizer—Protestant/Unionists. On the other hand, Protestant/Unionist participants viewed inclusive victimhood universally. The authors suggested that this was due to systematic power differences, with the majority group of Northern Irish Protestants being more inclusive towards victimhood because it is less costly for majority groups. Furthermore, Bilai and Vollhardt (2019) suggest that when advantaged groups emphasize mutual victimization, it contributes to the perpetration of harm by erasing group inequalities. One such example of this is the All Lives Matter response to the Black Lives Matter movement, which undermines the specific harms faced by Black Americans and can result in them not receiving justice (McNeill & Vollhardt, 2020).

In summary, advantaged and disadvantaged groups respond differently to identity-based reconciliation efforts. While universal inclusive victimhood may aid in reconciliation efforts, it is necessary to recognize differences in group willingness to accept a universal narrative. Which strategies will be successful for reconciliation depends on a group's level of power, so strategies must be tailored to each specific group.

Power and Status: The Needs-Based Model

Group differences in reconciliation can also be examined through the Needs-Based Model proposed by Shnabel and colleagues (2009). The model suggests that perpetration and victimization induce different needs (moral acceptance and power/agency), which must be addressed to increase groups' willingness to

reconcile. Victim groups are predominantly in need of agency after having their structural power reduced by the perpetrator group, while perpetrator groups require moral acceptance (Shnabel et al., 2009). According to Shnabel and Nadler (2010), when a perpetrator group victimizes the outgroup, they become concerned with the morality of their actions and the possibility of their peers rejecting them. Thus, to fully reconcile with the group that they victimized, perpetrators must receive acceptance from the victim group. Without this acceptance, the perpetrator group may engage in other methods to preserve their sense of morality (e.g., defensiveness), which can further devolve reconciliation efforts (Kahalon et al., 2018). Notably, this model does not insinuate that a perpetrator group is owed moral acceptance in response to their transgressions, merely that the acceptance is needed for both groups to view each other favourably.

The perpetrator group's desire to feel moral is tied to the specific perpetrator-victim relationship, rather than to individual group norms and values. Shnabel and colleagues (2009) compared two studies on the power-moral dimensions of reconciliation in Jewish Israelis. When the reconciliation was between Germans and Jewish Israelis on the subject of the Holocaust, Israeli victims showed increased desire for reconciliation when offered agency (Shnabel & Nadler, 2010; Shnabel et al., 2009). However, when the reconciliation was between Jewish Israelis and Arab citizens of Israel on the subject of a recognized illegitimate act of Jewish Israeli aggression, Jewish Israelis desired moral approval. As the same group required different needs to be met when they were either perpetrator or victim, this demonstrates that the needs pertain not to the group itself but rather to its relative status in the specific intergroup conflict. However, Shnabel and colleagues (2020) have noted that power needs may be stronger than acceptance needs regardless of group, because victimhood during conflict is often prioritized as an identity. When the victimhood of perpetrator groups is salient, both perpetrators and victims are likely to demand power. This complicates reconciliation attempts because offering power to both groups may result in the power imbalance continuing, but ignoring perpetrators' needs may lower their desire to reconcile.

Though needs may be met by the other group during the reconciliation process, moral acceptance needs can also be addressed without the victim group's involvement. In a series of studies, Barlow and colleagues (2015) demonstrated that perpetrator groups can fill their moral acceptance needs by seeing ingroup members express approval of an apology provided to the outgroup. This fulfillment was highest when the victimized outgroup also expressed approval of the apology, but it still occurred when only communicating with fellow ingroup members. The authors noted that relying solely on the ingroup's perspective of a conflict is harmful for reconciliation efforts, as it can cause them to ignore the needs of the victim group. However, fulfilling needs without the victim group can still be beneficial for reconciliation during instances when majority perpetrator group members have little to no contact with minority members (e.g., due to population differences).

Additionally, while the model was conceptualized to apply to aggressive conflicts between groups (Shnabel et al., 2009), a similar effect occurs when groups are disadvantaged even without direct conflict (Siem et al., 2013). Siem and colleagues (2013) found that advantaged and disadvantaged groups only differed in their power and acceptance needs when participants viewed the existing group inequalities as unjust. When inequality between groups was seen as justified, individuals in advantaged and disadvantaged groups had similar levels of both power and moral acceptance needs. Some research has indicated that power and acceptance needs are not always distinct, with some perpetrators focusing on power needs (Shnabel et al., 2020) and some victims focusing on acceptance (Siem et al., 2013). However, this only further demonstrates that careful consideration of group dynamics must be made when pursuing reconciliation.

Emotional Regulation and Group Beliefs

Čehajić-Clancy and colleagues (2016) proposed that reconciliation revolves around emotional regulation, suggesting that negative emotions surrounding the outgroup and the

conflict are to be reduced, while positive emotions are increased. Noor and colleagues (2008) found higher rates of forgiveness between both victim and perpetrator groups when they had higher feelings of empathy, suggesting that reconciliation efforts can be aided by addressing positive emotions in both sides of a conflict.

Many other studies on emotion-based reconciliation efforts see similar results between groups regardless of power asymmetry (see Čehajić-Clancy et al., 2016). Čehajić-Clancy and colleagues (2016) also suggest that emotional regulation during reconciliation is tied to beliefs about the other group and about the world. For instance, believing that the world is changing is associated with increased feelings of hope, which in turn is associated with increased support for reconciliation (Cohen-Chen et al., 2015).

Overall, targeting emotions and beliefs are regarded by researchers as effective strategies to promote reconciliation (Čehajić-Clancy et al., 2016). However, there are instances of emotional regulation where power asymmetry may affect success, two of which are negative emotions and malleability beliefs.

Negative Emotions

Though reducing negative emotions in both advantaged and disadvantaged groups is often important to reconciliation (Čehajić-Clancy et al., 2016), the specific emotions of shame and guilt have been shown to be beneficial in perpetrator groups. Noor and colleagues (2008) found that high rates of shame and guilt in perpetrator groups predicted desire to reconcile, meaning participants were more willing to reconcile when they viewed their own group negatively. The authors defined collective guilt as negative feelings surrounding a group's actions and the harms caused by the ingroup. Conversely, they defined shame as being focused on how the perpetrator group's actions worsen its image. Though both guilt and shame were associated with immediate desire for reconciliation, high rates of shame were associated with decreasing intent to reconcile over time (Brown et al., 2008; Noor et al., 2008). Brown and colleagues (2008) suggest that because shame is associated with a desire to improve group image, shameful perpetrators shift their behaviour from reconciliation to defensive tactics, such as arguing that their group's actions were justified. This is because it is an easier and more direct way of improving group image. On the other hand, guilt is specific to the perpetrator group's direct actions and is therefore resolved by working to aid the harmed group (Brown et al., 2008). Shnabel and Ullrich (2016) have further proposed that guilt in perpetrator groups aids reconciliation as it demonstrates to the victims that they are remorseful for their actions.

Notably, guilt has only been shown to benefit reconciliation when the perpetrator group experiences it. Increased feelings of guilt in victims may contribute to the continuing perpetuation of inequality, as it is not associated with victim groups seeking restitution (Kanyangara et al., 2014). This means that inducing or maintaining feelings of guilt will not aid reconciliation if applied to both groups. Shnabel and Ullrich (2016) highlight that emotional regulation without considering power dynamics will not effectively restore equality or positive intergroup relations.

Malleability Beliefs

Malleability beliefs refer to beliefs that people (or in this case, groups) are malleable and can change over time, and increases in this belief are generally beneficial to reconciliation (Čehajić-Clancy et al., 2016; Wohl et al., 2015). In a series of four studies, Halperin et al. (2011) primed belief for and against group malleability in Jewish Israelis, Arab citizens of Israel, and Palestinians in the West Bank. They observed higher outgroup opinion and willingness to reconcile when participants believed in group malleability, despite the considerable differences in the groups' power and goals.

However, disadvantaged groups may be more likely to endorse non-malleability beliefs (also referred to as *entity* beliefs). Studies on school performance have found a preliminary link between low socio-economic status and the belief that people do not change (Claro et al., 2016). While this link is not certain, those who have been significantly impacted and restrained by prolonged systematic factors may adopt non-malleability into their worldview and therefore

be more resistant to malleability messages. Wohl and colleagues (2015) note that individuals with entity beliefs can show an increase in negative intergroup attitudes when the outgroup makes reconciliation efforts because they may perceive it as a manipulation attempt. If disadvantaged groups do have higher entity beliefs, this can greatly impact reconciliation, particularly since rejection can cause ingroup members to be less inclined to reconcile (Barlow et al., 2015). Therefore, if disadvantaged groups do not believe the advantaged group will change, they are more likely to reject any attempts by the advantaged group to change, which in turn reduces the advantaged group's willingness to change. While research has yet to note a definitive link between victimized groups and resistance to malleability messages, recognizing when one group may be less impacted by a reconciliation attempt is crucial.

Conclusions

Levels of asymmetrical power can influence how groups construct their identities, including how connected they feel to the outgroup, and who they see as a victim. Furthermore, reconciliation measures designed to increase perceptions of connectedness can in fact be harmful to disadvantaged groups, making recognition of power imbalances important. This is also evident in needs-based reconciliation efforts, which dictate that perpetrator groups need acceptance and victims need agency/power, though there is a considerable amount of variance in these need levels. The potential role of negative emotions also differs depending on group status, with guilt in advantaged groups promoting reconciliation efforts. Overall, the success of strategies to address reconciliation can be dependent on group differences. Many of the differing factors are intertwined. For instance, the need for moral acceptance is connected to the group's emotions and perceptions, and the label of victimhood is highly salient in the desire for either moral acceptance or agency/power. Though it is important to examine factors individually, it may be that impacting one has a positive (or negative) influence on the other factor.

It is clear that there is no easy solution for universally addressing the influence of power asymmetry. In interviews with Israeli and Palestinian representatives on the success of contact interventions as a reconciliation method, many interviewees gave arguments both for and against contact, highlighting ways it could help and ways it may harm (Theissan & Darweish, 2018). Clearly, situations are nuanced even in the eyes of the individuals directly impacted.

Theissan and Darweish (2018) advise allowing disadvantaged groups to guide reconciliation attempts to more accurately address their needs, rather than having people less connected to the conflict impose their solutions. This would prevent inappropriate reconciliation efforts that disproportionately harm disadvantaged groups, though it also has the potential to alienate the specific needs advantaged group members have during the reconciliation process. Overall, it is beneficial to customize strategies when addressing groups individually, and to keep differing needs in mind when mediating intergroup reconciliation behaviours.

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Framing Autism in the Hiring Process: How Diagnostic Disclosure Shapes First Impressions

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Abstract

Job applicants who disclose an autism spectrum disorder (ASD) diagnosis are expected to face different treatment in the hiring process than those who exhibit ASD symptoms without disclosing a diagnosis. Although autism diagnoses are becoming increasingly common, workplace inclusion remains limited. This paper reviews the current literature on the topic through the lens of impression formation theory. It also explores the decision to disclose a diagnosis in different contexts, and how masking behaviour in individuals with ASD can hinder their well-being. Research has shown that employers may favour neurotypical candidates over neurodivergent ones, despite the latter's valuable skills and qualities. This paper suggests that further research is required to investigate the role of language in hiring decisions. Additionally, it calls for more research on company policies and the Employment Equity Act. As companies and employers aim to diversify their workforce, a better understanding of how language influences candidate evaluations is crucial for reducing bias and promoting fair employment opportunities for individuals with autism.

Keywords: *autism, employment, hiring bias, language framing, disclosure, diagnosis.*

Introduction

Autism in the workplace is a topic that remains underexplored, despite its importance in fostering inclusive employment practices and its relevance in hiring decisions. As the number of autism diagnoses continues to grow, there is an urgent need to address hiring biases and workplace discrimination rooted in harmful stereotypes. In 2022, the Public Health Agency of Canada (PHAC) published a report highlighting key findings from the 2019 Canadian Health Survey on Children and Youth (CHSCY) (Statistics Canada, 2019). According to this survey, 2.0% of Canadian children and youth aged 1-17 years were diagnosed with some form of autism spectrum disorder (ASD) (Public Health Agency of Canada, 2022). According to the Department of Justice Canada (2023), 80% of people with intellectual disabilities, including autism, are unemployed. Most high school graduates in this population continuously struggle to find employment, despite the training they have received, and the experience gained from work placements.

Although there have been improvements with hiring practices for individuals with disabilities, the subtle ways that diagnostic

language influences employer perceptions remain underexamined. This literature review begins by examining the diagnostic criteria for autism spectrum disorder and its implications in the workplace. It then discusses impression formation theory to explain how diagnostic labels can influence social judgments and perceptions, as well as how these can affect hiring decisions. Next, the review focuses on two interrelated areas: disclosure, and masking (camouflaging) behaviours among autistic individuals, including factors that may promote or deter diagnostic disclosure. Finally, it reviews the gap in the existing literature regarding the employment of autistic individuals based on disclosure decisions.

This paper synthesizes existing research to show how diagnostic disclosure (e.g., using the ASD label during the hiring process) may activate stereotypes that shape hiring outcomes, examined through the lens of impression formation theory.

Theoretical Framework: Impression Formation

Impression formation theory was first introduced by Solomon Asch (1946). In the classic warm-cold study, participants were exposed to identical trait lists of either "warm" descriptions or "cold" descriptions of a person. Participants then wrote down their impression of the target person (Nauts et al., 2014). What Asche (1946) discovered was that a certain trait (e.g., “intelligent” or “deceptive”) act as central traits, which shape overall perceptions of a target person.

Although new research has been conducted based on Asch's original work, his theory remains especially relevant in hiring contexts. Impressions of job candidates are often formed quickly and through standardized means (Chernyshenko & Stark, 2005). In the case of autistic applicants, impression formation may be influenced by their decision to disclose their diagnosis to the employer. The inclusion of a clinical label may activate schemas or reinforce stereotypes about autism.

While linguistic information is crucial to forming first impressions, Willis and Todorov (2006) found that people can make initial judgements of others based on their facial appearances after 100 milliseconds. In their research, they discovered that impressions that were made at this speed were almost as consistent as those formed by participants viewing faces with no time limit. Applying these findings to the job hiring process, evaluators can make decisions based on minimal information, and before any substantive interaction occurs. Adding an autism diagnosis into the mix can speed up these decisions. Throughout this literature review, analyses of past research will be analyzed through the lens of impression formation theory. Before exploring the research that has come out about autism and the hiring process, it is important to define some key terms that will be used throughout the analysis.

Key Terms

Impression formation: The psychological process by which individuals form opinions or judgements about others based on limited information, such as appearance, behaviour, or language (Asch, 1946).

Framing/diagnostic framing: The way that the information is structured or presented, which influences how it is interpreted by the receiver (Thibodeau & Boroditsky, 2011). In diagnostic framing, it is the presentation or omission of a diagnostic label which can trigger pre-existing biases/stereotypes.

Disclosure: The act of revealing one's autism diagnosis to another party (close friends, family, employers, etc.)

Masking: The intentional (or subconscious) suppression or alteration of autistic traits to appear more like neurotypical individuals. This is done often to avoid stigma or discrimination (Cage & Troxell-Whitman, 2019). Often causes mental and physical exhaustion.

Literature Review

The American Psychiatric Association's Diagnostic and Statistical Manual (DSM-5) defines autism spectrum disorder (ASD) as a neurodevelopmental condition marked by persistent deficits in social communication and restricted, repetitive behaviours, with symptoms

present from early development and significantly impacting daily functioning (Centers for Disease Control and Prevention, 2025). British Columbia reported a crude prevalence of ASD as 2.2%, with a 95% confidence interval (Public Health Agency of Canada, 2022).

As more children with ASD enter adulthood, autism and other related disorders will become increasingly prevalent in the workplace. According to the Canadian Academy of Health Sciences (2022), many autistic people want to work. Still, they are not included in the labour market due to social factors in public-facing jobs, inaccessible means of transportation, and concerns about being isolated on the job, among other challenges.

Diagnosis Disclosure

The disclosure of an autism diagnosis can be one of the largest hurdles to overcome for job applicants (Romualdez et al., 2021). How disclosure is framed (e.g., the language used) can influence how evaluators perceive a candidate. This, in turn, can activate or reduce stereotypes, depending on how disclosure is handled (McMahon, 2025). We can compare this idea to how people disclose a highly stigmatized mental health disorder, such as depression. A study done by Reali and colleagues (2016) on depression found that certain linguistic cues can lead to biases during first impressions. Moreover, they found that when using metaphors such as "depression is a place in space" (e.g., a person fell into a deep depression) and "depression is an opponent" (e.g., within the claws of depression), the participants exposed to the latter condition agreed that it is better to be separated from the depressed individual.

Previous studies in cognitive science and cognitive linguistics have shown that the language we use may influence our perception of people, and other events/situations. For instance, Thibodeau & Boroditsky (2011) investigated how metaphors influence the way people think about complex political issues. These linguistic cues may influence whether an individual with autism feels safe to disclose their diagnosis.

Research on ASD disclosure decisions has demonstrated the complexity of those decisions. For instance, Lindsay and colleagues (2021) conducted a systematic review across 26 studies, involving over 7,000 participants. They explored the disclosure of an autism diagnosis and its impact on workplace accommodations. They highlight that with disclosure, autistic individuals may experience greater social acceptance and inclusion, flexibility with accommodations, and an increased awareness of ASD (Lindsay et al., 2021). However, many ASD individuals do not disclose because of experiences with stigmatization and discrimination.

When disclosure does occur, there are a few common reasons as to why. These reasons include age of diagnosis, the social demands of a job, as well as workplace policies (Lindsay et al., 2021). These findings support that disclosure is embedded in impression management, not simply a means of getting support. Autistic individuals must weigh the benefits of self-advocacy against the risk of reinforcing negative stereotypes in evaluators (Thompson-Hodgetts et al., 2020). This is also in line with impression formation theory, which posits that limited information based on an individual's personality is enough to trigger cognitive schemas that influence how others perceive a candidate's competence and fit for a job (Thomas et al., 2022). Thus, disclosure is not simply a personal decision, but a strategic one; the decision to disclose is determined by anticipating how others will form impressions based on the autism label.

While Lindsay and colleagues (2021) provided broad insights on disclosure decisions, Nimante and colleagues (2023) offered a more in-depth exploration of individual disclosure through a case study in Latvia involving four autistic adults. This study aimed to investigate whether autism should be disclosed to an employer. They found that while these individuals had not disclosed their diagnosis to their employers or coworkers, they were open to sharing it with their close friends outside of the workplace (Nimante et al., 2023). They highlighted common reasons as to why participants chose not to disclose their autism.

Consistent with Lindsay and colleagues (2021), they found that fear of stigma, and desire

to be perceived as neurotypical were primary reasons for non-disclosure. Next, they did not feel there could be any benefits to disclosing. What was important to these participants was raising awareness among their employers about the unique limitations of individuals with ASD and how to overcome them, rather than just informing them about their own autistic status (Nimante et al., 2023). This suggests that merely stating a diagnosis may be less meaningful to employers than communicating an individual's specific support needs.

Masking/Camouflaging

Studies on masking behaviours have previously observed similar patterns of selective disclosure (Alaghband-Rad et al., 2023; Cage & Toxell-Whitman, 2020; Pryke-Hobbes et al., 2023). This related concept helps explain why many autistic individuals choose not to disclose their diagnosis in professional settings. It is also important to consider the fact that autism falls under the category of an "invisible" disability. This means that the disability is often not outwardly expressed.

One trait that is common amongst many autistic individuals is masking behaviour. Masking, or social camouflaging, is a characteristic of autistic individuals who actively try to hide (mask) their autism features in social contexts to blend in with the neurotypical population (Alaghband-Rad et al., 2023; Cage & Troxell-Whitman, 2020).

While masking may reduce the risk of stigmatization in the moment, it is a very energy-consuming behaviour and can lead to other difficulties, including mental health disorders, poor well-being, and low job performance (Cage & Troxell-Whitman, 2020; Pryke-Hobbes et al., 2023). When it comes to the hiring process, many autistic individuals will mask their autistic traits to appear more "normal" to a neurotypical evaluator (Perry et al., 2021).

As it can be challenging to maintain masking for long periods, the impression given during an interview may not accurately reflect the candidate's authentic workplace behaviour (Hull et al., 2017; Perry et al., 2021). While literature on masking is still developing, it is still important to understand the role it may play during the hiring process. Given that interviews are highly performative social situations, autistic candidates may feel pressured to hide their autistic traits out of concern that they will be misinterpreted or stigmatized (Norris et al., 2024).

First Impressions

A recent systematic review and meta-analysis by Wanigasekera and colleagues (2025) examined 21 studies comparing first impressions of autistic and non-autistic individuals across various modalities (e.g., video, audio, transcript). They found that autistic individuals were rated less favourably than their non-autistic counterparts. This was especially evident in the context where nonverbal cues are present. According to the paradigm of impression formation theory, these nonverbal cues can activate existing stereotypes (Riggio & Friedman, 1986; Foster et al., 2024).

However, this activation disappeared with the transcript condition (Wanigasekera et al., 2025). This indicates that the content of the speech is not as significant as the way it is presented. When autism is explicitly disclosed during the hiring process, raters may subconsciously associate it with negative traits (e.g., social awkwardness) (McMahon, 2025).

Moreover, findings from Wanigasekera and colleagues (2025) support the view that impression formation is also a product of the evaluator's own characteristics, perceptions, and biases. In the context of hiring, the mention of a diagnosis may be enough to override a candidate's credentials by cueing pre-existing beliefs about what autism means in a workplace (Norris et al., 2024; McMahon, 2025). Wanigasekera and colleagues (2025) found that increased knowledge about autism was associated with more positive perceptions of autism.

Barriers to Securing Employment

While the DSM-5 primarily outlines autism in terms of deficits and challenges, and impressions of autistic individuals are often negatively skewed, it is equally important to recognize the strengths and positive qualities that autistic individuals can bring to the workplace. In a qualitative study, Cope and

Remington (2022) highlighted the lived experiences of 66 autistic individuals in the workplace. They asked participants to describe their views about employment-related strengths. Four areas where participants felt they were strongest included: cognitive advantages, efficiency, strengths related to personal qualities, and the ability to offer a unique autism-specific perspective.

Results from this study have mostly aligned with previous, although limited, literature. This is especially true for cognitive skills (e.g., attention to detail, pattern recognition, logic). However, they identified two strengths that were inconsistent with previous research: superior executive functioning and organizational abilities, as well as the capacity to show empathy (Cope & Remington, 2022). Moreover, participants expressed interest in tasks that neurotypical employees may dislike, such as repetitive tasks. This study highlights the value that autistic employees can bring to the workplace.

Despite the strengths that many autistic employees express, the process of securing employment is complicated for many. Using mock job interviews, Whelpley and May (2023) examined the job interview performance of those with ASD compared to neurotypical (NT) individuals. Both ASD and NT individuals were recorded doing interviews. Participants who were not told about the neurodiversity of the candidates were assigned one of two conditions: (1) watch a video of the interviewee or (2) read the interview transcripts without the video. Whelpley and May found that NT individuals outperformed individuals with ASD in the video condition.

However, individuals with ASD outperformed those without ASD in the transcript condition (Whelpley & May, 2023). The researchers suggest that "social style … influences hiring decisions" in job interviews, which may bias recruiters against highly qualified candidates who may not align with the expected social norms. These findings suggest that the social style and patterns of autistic candidates may influence hiring outcomes.

In the United Kingdom, a study similar to Cope and Remington (2022) was conducted, focusing on the challenges of the hiring process using both quantitative and qualitative methods (Davies et al., 2023). Researchers surveyed 225 ASD, 64 ND (neurodiverse; unspecified), and 88 NT (neurotypical) participants. They found four experiences that participants from all three groups commonly shared: (1) frustration with the focus on social skills; (2) perceived need for more flexible hiring processes; (3) desire for more clarity; and (4) the importance of the environment. It is important to understand that NT and ND experiences can be shared and are not always separate. Specific barriers that ASD participants reported about the hiring process included finding suitable opportunities in the first place, the initial written job application (due to AI screeners), being asked open-ended questions during the interview, and physical barriers.

Davies and colleagues (2023) explain that individuals with ASD may have a deficit in episodic memory recall, making open-ended questions (e.g., "tell me about a time when…") difficult to answer. In addition to the previous four experiences, this study identified three common experiences within the hiring process unique to ASD participants: they felt as though they had to mask to succeed in the interview, they struggled to read between the lines, and they risked discrimination or stigma against them if they chose to disclose their diagnosis or needs. These traits and barriers may influence hiring decisions based on how autism is framed in the application.

In 2021, Whelpley and colleagues conducted a study to bridge that gap using data from the employment histories of autistic individuals and individuals in managerial roles who oversee autistic employees. One of their research questions inquired about the experiences of autistic applicants and the kinds of barriers they may face during the hiring process. Whelpley and colleagues found that a common topic revolved around the disclosure of an autism diagnosis.

Further, they included four main areas where autistic candidates felt there were barriers: (1) job performance quality; (2) focus on the autistic diagnosis rather than the candidate as a person; (3) ignorance from the interviewer; and (4) unequal treatment concerns. Interestingly, participants who did disclose a diagnosis reported that afterward, the interview seemed to

shift to the diagnosis and less on the candidate as an individual.

Methodological Issues in ASD Research

There is a significant methodological concern in ASD workforce research. One critical issue in the literature involving the discussion of ASD is the lack of published research on the topic of adults with ASD in general. According to a 2013 meta-analysis of approximately 1,217 publications involving adults, only 13 studies met the criteria for high methodological quality (Howlin, 2013). This significant gap in the literature is crucial to fill as the autistic population ages. Moreover, there is a gap in organizational research focused on management. For instance, diversity hiring programs, or support programs to assist the transition into/back to employment (e.g., vocational rehabilitation) (Vancouver Coastal Health, 2025). Literature that does exist on organizations is either taken from general psychology or focuses on how autism is a disability (Whelpley et al., 2021).

The populations that are studied are often not representative of the general autistic population. Many of the studies that were mentioned in the literature review had extremely small sample sizes. Moreover, most participants were White/Caucasian and received higher education (Anderson et al., 2020). However, this is not the reality for many autistic individuals who are entering the workforce. Roux and colleagues (2013) collected data from Wave 5 of the National Longitudinal Transition Study 2 (NLTS2). This survey focused on American young adults, aged 21-25, who received special education services in high school and looked specifically at their employment histories. Their results showed that 53.4% of young adults with ASD had never received pay from work outside the home since leaving high school (Roux et al., 2013). This is the lowest rate among other disability groups.

Additionally, they received less compensation than other groups. Roux and colleagues (2013) conclude that those with ASD may find it more challenging to transition from high school to finding employment shortly after graduating. This lack of adult-focused research has hindered our understanding of how hiring decisions are made depending on whether a candidate explicitly states they have a diagnosis, a need or neither. Furthermore, we know less about how employers respond to these needs (Samtleben, 2024).

In their response to Vivanti (2020)'s editorial on person-first (person with autism) versus identity-first language (autistic person), Botha and colleagues (2021) highlight critical methodological issues related to the representation of individuals with ASD in ASD research. Additionally, while ASD individuals do engage with research (e.g., participating in a survey), they are often deemed "not autistic enough" to be qualified, and those who have higher communication support needs are kept out of research entirely (Botha et al., 2021). Vivanti (2020) is critiqued for implying that being more able equates to being less autistic. This is problematic because it assumes that autism is a linear scale in terms of severity. The assumptions of abilities of "high-functioning" or "low-functioning" ASD individuals can further influence employer perceptions. An increase in awareness of different qualities of autistic individuals will help to decrease these assumptions.

Present research lacks the understanding of how autistic candidates are perceived in the hiring process. Whelpley and May (2023) lay the necessary groundwork by examining how physical and behavioural cues influence interviewer evaluations. However, their focus on visible traits poses a challenge, as autism is often considered an "invisible" disability, and not all autistic traits are outwardly expressed. As such, non-visible factors, such as language framing and diagnostic disclosure, may be just as influential. To address this gap, the present paper adopts a theoretical lens, using impression formation and language framing. These perspectives help explain why disclosure matters and how the mere mention of a diagnosis during an interview can significantly impact the opportunity for the candidate.

Discussion & Future Recommendations

As the number of ASD diagnoses increases (Statistics Canada, 2019), it is more important

than ever to accommodate different needs regarding employment. The present paper examined how diagnostic language framing may influence hiring decisions for autistic candidates through Asch's (1946) impression formation theory. Although studies do exist based on discrimination against those with ASD, there is a significant gap in research, notably on employment struggles. Impressions are formed as quickly as in 1/10th of a second (Willis & Todorov, 2006). When a diagnostic label is included in a candidate's resume, it may trigger biases even before they speak at the interview. Some studies, such as McMahon (2025), suggest that disclosure of an autism diagnosis can improve impressions, increasing understanding and openness. However, employers or evaluators often see the diagnosis before the individual (Norris et al., 2024).

The Canadian Academy of Health Sciences (CAHS) (2022) developed a pyramid model outlining the various levels of employment support. The levels, beginning with the bottom tier, are as follows: (1) Skills and specific strategies (e.g., assistive technology); (2) Program components (e.g., job coaching); (3) Service models (e.g., transition planning); (4) Packaged interventions (e.g., supported employment); (5) Policy approaches (e.g., anti-discrimination legislation). CAHS (2022) provides seven principles of supported employment, including wages, strengths, systems changes, and self-determination. By integrating these principles, alongside the

pyramid model, employers can continue strengthening their employment demands and opportunities to better suit individuals with autism.

Future research should investigate the present review's question, including hiring biases and barriers, through collaboration with neurodivergent communities. Additionally, research on this topic will benefit from larger-scale replications with more diverse samples. Howlin (2013) highlighted the lack of adult-focused research around autism in general (not exclusively employment-focused). Pellicano and colleagues (2014) conducted a systematic study, surveying different focus groups (including adults with ASD, family members, practitioners, and researchers) on what autism research should focus on in the United Kingdom. These focus groups called for more research for services and supports, research logistics, as well as knowledge about autism in general. Moreover, the inclusion of the autistic community should be prioritized to ensure that resources are being distributed where it is most needed.

Longitudinal studies should also be conducted to examine hiring outcomes based on whether the candidate discloses a diagnosis. It may also be beneficial to include studies about workplace policies and to evaluate hiring equity laws (e.g. Employment Equity Act (EEA)) (Employment Equity Act, 1995). In particular, it is important to assess the EEA's positive and negative contributions to employment outcomes for autistic individuals since its implementation. Overall, increased understanding of how disclosure influences impression formation during hiring can reduce stigma and improve equity for autistic job candidates.

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Atheism as a Mental Health Protective Factor for Members of the LGBTQ+ Community

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Abstract

The relationship between religiosity and mental health for LGBTQ+ individuals is complex. While some research suggests religion can act as a protective factor for mental health in the general population, those in the LGBTQ+ community may face discrimination and stigmatization in religious environments, which can cause a worsening of mental health symptoms like stress and depression.1 In contrast, atheists are more supportive of the LGBTQ+ community, and research suggests that atheism is associated with better mental health outcomes in the general population. Studies show that atheists have better overall mental health compared to religious individuals, and they may feel more solidarity with marginalized groups due to their own experience with prejudice, which can offer a sense of community for LGBTQ+ individuals. However, no study to date has examined whether atheism can act as a protective factor for LGBTQ+ individuals' mental health. The current literature has a sole focus on religiosity and disregards the role of non-belief. Given these literature gaps, this paper calls for more dedication to research into the support that atheism can offer for LGBTQ+ individuals' mental health by providing a sense of community and reducing exposure to harmful discriminatory attitudes. Understanding this relationship can provide a more comprehensive view of how to support LGBTQ+ individuals with mental health struggles.

Keywords: *atheism, religion, mental health, LGBTQ+ community.*

Argument

The relationship between religiosity and mental health is a complex one, especially when it comes to individuals who are lesbian, gay, bisexual, transgender, queer or another sexuality (LGBTQ+) (Lekwauwa et al., 2023). Religion can have a positive effect on mental health, but this isn't always the case with LGBTQ+ people. Many religious organizations carry out discriminatory practices and prejudiced rhetoric surrounding the community that can be related to a worsening of depression symptoms for LGBTQ+ people (Lekwauwa et al., 2023). Compared to Christian Americans, atheist Americans are more supportive of LGBTQ+ rights (Schwadel et al., 2025). The relationship between sexuality, mental health and religiosity

is constantly being explored, but not the relationship between sexuality, mental health and atheism, and as such, less is known about the impact atheism can have on LGBTQ+ people's mental health. (Lekwauwa et al., 2023). Just because religion can be helpful to some members of the LGBTQ+ community, it does not mean the effects of atheism should not be investigated, as it can be helpful to other members of the community. Determining whether atheism can help LGBTQ+ individuals reduce the development/worsening of mental health problems (serve as a protective factor) can provide further insight into this complex topic (Lekwuawa et al, 2023). Additionally, no research with a Canadian sample surrounding this topic has been conducted. As such, research should examine the role that atheism could play in acting as a protective factor for mental health for those who are LGBTQ+, especially in Canadian samples.

Summaries and Critical Analyses

Compared to religious Americans and other religious nones (individuals who have no religious beliefs), atheist Americans are more likely to be in favour of anti-discrimination laws for the LGBTQ+ community (Schwadel et al., 2025). Religious nones were operationalized as atheists, agnostics and believers of nothing in particular (NIP). Data was collected from four American Values Atlas (AVA) and American Value Survey (AVS) questions to assess the views religious and non-religious Americans have on LGBTQ+ rights. The AVA and AVS are annual nationwide surveys used to assess Americans' attitudes about religion, personal values, politics, and current events to understand America's public opinion. Support for LGBTQ+ rights was determined by coding 1 as greater support and 0 as less support, dummy variables (zeroes and ones) were used to measure religious affiliation. Compared to all other groups surveyed, it was found that atheists were three times more likely to support anti-discrimination laws. Atheists have a 95% probability of supporting same-sex marriage compared to other religious groups examined (Schwadel et al., 2025).

The operationalization of religious nones provides valuable evidence that atheists can often be more supportive of LGBTQ+ rights because of their atheist label, as it tends to be more stigmatized (Schwadel et al., 2025). Categorizing non-believers into different groups made participants choose their form of non-belief and give themselves a label, instead of being one non-religious group. Atheists tend to experience more stigmatization compared to other non-believers, so they may feel more connected to other stigmatized groups, which other groups will not experience. This connection can result in atheists being more supportive of LGBTQ+ rights, which can positively impact LGBTQ+ individuals (Schwadel et al., 2025). When shared experiences of discrimination in stigmatized groups are highlighted, members of different stigmatized groups will feel more connected to each other (Cortland et al., 2017). When Asian Americans and African Americans (both stigmatized groups) perceived their discrimination to be similar to LGBTQ+ people, they felt more connected to them, and tended to show more support for LGBTQ+ rights (Cortland et al., 2017). Having this operationalization allowed researchers to determine how much more supportive atheists are of the community compared to other groups (Schwadel et al.,2025). A limitation of this research is that data was only collected via AVA and AVS questions, which only have four questions assessing views on LGBTQ+ people. Conducting a secondary survey with more questions about how religious individuals and religious nones view LGBTQ+ people will provide more comprehensive results about how religious and non-religious people view the community (Schwadel et al., 2025).

High religious fundamentalism scores can have a negative effect on depression and stress symptoms in American LGBTQ+ people (Warlick et al., 2021). The Religious Fundamentalism Scale (RFS) is used to measure the strength of someone's belief, and the Depression, Anxiety and Stress Scale (DASS) is used to measure anxiety, stress and depression, both were used to assess these variables in participants. A religiously diverse sample was used, including participants who were Christian, Jewish, Hindu, Islamic, Spiritual, Atheist and Agnostic. Linear and curvilinear analysis was conducted on the data. In curvilinear analysis,

curve estimation procedures are used, which can detect quadratic relationships (resulting in a curve). For LGBTQ+ people, linear analysis shows that stress and depression explain 18% and 13% of the variance in RFS scores, respectively, demonstrating that higher RFS scores positively correlate with higher DASS scores in both depression and stress. Curvilinear analysis explained 31.1% of the variance between anxiety and religious fundamentalism, so those lower and higher in religious fundamentalism will experience less anxiety (Warlick et al., 2021).

Warlick and colleagues (2021) found that not all facets of mental health are affected by religion in the same way, especially in LGBTQ+ people. These analyses suggest that religion negatively impacts depression and stress, possibly due to the discrimination many LGBTQ+ people can face in religious spaces. Understanding that religious fundamentalism and anxiety present a curvilinear relationship shows that not all aspects of mental health will be severely impacted by religion. Some LGBTQ+ people may find religion helpful when dealing with anxiety symptoms, while others may find it detrimental. A limitation of this study is that both the DASS and the RFS were completed online via a self-report questionnaire. So, participants' responses may not be entirely accurate. Participants may lose focus during the survey and provide careless answers, or they may not understand the question being asked, which can lead to discrepancies in answers and affect accuracy. Clarifying vague or unclear terms and/or including examples in questions can combat some of the limitations of online surveys, which can allow for more accuracy (Warlick et al., 2021).

Cross-sectional data found that compared to other American non-believers and believers, American atheists report having lower levels of common mental health symptoms (Baker et al., 2018).[8] The Baylor Religion Survey (BRS) was used to gather data about the relationship between different religious affiliations and mental health, and a variety of sociodemographic variables were collected to control for confounding variables. Survey answers were used to measure levels of social anxiety, general anxiety, paranoia, obsession and compulsion. Data was collected from Jewish, Catholic, Evangelical, Mainline and Black Protestants, non-affiliated theists, atheists and agnostic participants. It was found that atheists have the lowest mean scores for general anxiety, paranoia, obsessions and compulsions compared to all other groups. Only 46% of atheists report having any mental health issues, compared to the non-affiliated theists at 73%, showing that atheists have better mental health outcomes compared to other groups (Baker et al., 2018).

Controlling for confounding variables (sociodemographic factors) isolated the role religion plays in mental health, showing that atheists have overall better mental health outcomes even when considering sociodemographic factors (Baker et al., 2018). Isolating the relationship between religion and mental health strengthens the internal validity of the study. As such, the results found that mental health outcomes can be solely attributed to religion, not any other outside factors like income, gender or race. This control shows that atheism may have a positive effect on mental health in the general population, as only 43% of atheists report having mental health problems. So, these results may also be seen in other specialized groups, like the LGBTQ+ community. However, given that this data is cross-sectional, it cannot determine causation between mental health and religious and non-religious affiliations. Using a longitudinal design can provide causal data (Baker et al., 2018).

Counter Argument

Given the complex relationship between religiosity and mental health in the LGBTQ+ community, religion may have a positive effect on LGBTQ+ individuals' mental health (Lekwauwa et al., 2023). Systematic reviews have found evidence that religiosity can have a positive impact on LGBTQ+ individuals' mental health (Lekwauwa et al., 2023; Wilkinson & Johnson, 2021). A systematic review done by Lekwauwa and colleagues (2023) found that out of eighteen studies, two showed a strictly positive relationship between religion and mental health in an LGBTQ+ sample, which included transgender individuals.

Additionally, a systematic review done by Wilkinson and Johnson (2021) found that out of twelve studies, a positive/protective outcome was reported in three studies.

Summaries and Critical Analyses

LGBTQ+ youths were more likely to seek out spiritual help when feeling stressed, after completing coping skills training (Craig et al., 2018). A manualized cognitive behavioural intervention called affirmative coping skills-based intervention (AFFIRM) was used to provide training to 35 LGBTQ+ youth on how to build adaptive coping methods. The Adolescent Coping Orientation for Problem Experiences (A-COPE) was used pre- and post-AFFIRM to assess changes in coping strategies among LGBTQ+ youth. Before AFFIRM, seeking spiritual help from a religious figure was one of the least utilized coping methods among LGBTQ+ youths. However, after AFFIRM, a 19% increase was reported that LGBTQ+ youth would seek out support from a religious figure in times of stress. Additionally, after AFFIRM participants were more likely to seek diversion (i.e. watch TV/play games), engage in demanding activities (i.e. working out), use humour, and solve family problems as coping methods (Craig et al., 2018).

Despite the examination of pre- and post-test data allowing researchers to determine the effectiveness of AFFIRM, the lack of a control group and small sample size discredit Craig and colleagues' (2018) findings. By having no control group, researchers have no way of knowing the true effects of AFFIRM, as they have no control group to compare A-COPE scores to. This damages the internal validity of the study and the results. When testing an intervention/treatment, researchers typically use a control group as a baseline. They will be able to compare pre- and post-test results from the control and intervention group and can determine if it was the intervention that caused changes in participants. Since Craig and colleagues (2018) had no control group, they cannot make a sound causal claim that AFFIRM is the reason for the A-COPE changes, as there could have been other factors affecting the scores. Additionally, the small sample size (N=35) not only damages the external validity of the study, making it hard to generalize to the greater LGBTQ+ community, but it also makes the interpretation of the statistics questionable. Having a sample size this small can lead to statistical errors, which can damage the statistical significance of the results. However, AFFIRM does provide hopeful insights into how positive coping methods can affect LGBTQ+ youth's willingness to reach out to a spiritual figure in times of distress, despite the study's lack of validity (Craig et al., 2018).

American LGBTQ+ adults who use positive religious coping can moderate negative mental health outcomes due to external homophobia and internalized homophobia (Brewster et al., 2016). Data was collected from Christian, Jewish, Buddhist, Spiritual, Hindu, Muslim and other religious participants. They were asked to answer the Heterosexist Harassment, Rejection and Discrimination Scale (HHRDS) and the Internalized Homophobia Scale (HIS) to assess their experiences with external and internalized homophobia. Religious coping was evaluated by the Brief Measure of Religious Coping Styles (B-RCOPE). The Hopkins Symptom Checklist (HSCL-21) and the Psychological Well-being Scale (PWBS) were used to measure negative mental health symptoms and well-being. Positive religious coping did moderate the effect internalized homophobia has on well-being by 32%. However, positive religious coping did not moderate the effect external homophobia has on mental health outcomes or well-being (Brewster et al., 2016)

Using the B-RCOPE, a tool not made with LGBTQ+ individuals in mind, limits its construct validity (Brewster et al., 2016). This measure creates a dichotomy of religious coping, not considering LGBTQ+ individuals' complex religious relationships. Positive and negative religious coping can be highly subjective and mean different things depending on religion. Some LGBTQ+ individuals may feel internally conflicted about their religious experiences, and this won't be shown due to the dichotomous nature of the measure. The B-RCOPE not accurately measuring LGBTQ+ religious coping experiences, can have serious effects on the interpretation of the study's results. Positive religious coping may not moderate the effect of internalized homophobia

on well-being because of this measure (Brewster et al., 2016). However, this study did try to examine how negative LGBTQ+ experiences affect mental health and well-being and not just look at general negative experiences in an LGBTQ+ population (Brewster et al., 2016).

Justification

In the general population, atheism is predicted to have a positive impact on mental health outcomes, showing that atheism can act as a protective factor (Baker et al., 2018). As the LGBTQ+ community is large and diverse, this impact may also apply here. Many LGBTQ+ people experience discrimination, harassment and internalized homophobia, which are stressors that may lead LGBTQ+ people to experience more mental health struggles (Warlick et al., 2021). Not every LGBTQ+ person will have the same experience with religion, which can have a specific impact on their mental health (Lekwauwa et al., 2023). Given that many studies' samples have very few atheists, the effect that atheism could have on LGBTQ+ people is underdeveloped (Lekwauwa et al., 2023; Warlick et al., 2021). Examining the aspects of atheism that could have a positive effect on LGBTQ+ people's mental health is a scarcely researched topic (Warlick et al., 2021). While studies have shown that to some LGBTQ+ individuals, religion can have a positive impact on their mental health (see Craig et al., 2018; Brewster et al., 2016), religion may not be the only factor that can serve as a mental health protective factor as different individuals can have different complex relationships with religion that may end up harming their mental health. Conducting a study focusing on the impact of atheism on LGBTQ+ mental health can provide valuable insight into this complex topic.

Conclusion

To date, no study has examined whether atheism can serve as a mental health protective factor for LGBTQ+ people. Many studies in this area tend to focus on how religion impacts the mental health of the LGBTQ+ community (Warlick et al., 2021). Additionally, many studies on this topic have no or little atheist representation in their samples, making it difficult to determine the role atheism plays in mental health outcomes (Warlick et al., 2021). Work done by Schwadel and colleagues (2025) shows that atheists are more supportive of the community, which could positively impact its members. Warlick and colleagues (2021) found that LGBTQ+ youth with high levels of religious fundamentalism experience worse depression symptoms, which shows how damaging religion can be to the community. While atheism has been seen as providing better mental health outcomes in the general population, no work has been done to see if these results apply to minority groups such as LGBTQ+ (Baker et al., 2018). Examining the role that atheism plays in impacting LGBTQ+ individuals' mental health can provide valuable information on the relationship between religion and LGBTQ+ individuals.

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