

A Systematic Review on Academic Stress, Disordered Eating Behaviors, and Weight Stigma in Adolescents

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Abstract

Background: Adolescents face rapid changes in their body and identity formation during their development phase. During this phase they are even more likely to be affected by stress and cause harmful long-term effects on health. Studies show that academic stress, disordered eating behaviors (DEBs), and weight stigma are linked together as a bi-directional feedback loop. This systematic review includes studies from 2016 to 2026 to understand the psychological, physiological and social factors that link these three concepts among Indian adolescents.

Methodology: This review follows PRISMA guidelines. Sources used in this study included literature from PubMed, MEDLINE, PsycINFO, Web of Science, Scopus, and Google Scholar. The review included empirical studies focusing on school and college-going Indian adolescents (aged 10–19). Academic strain, weight stigma, and DEBs were measured using validated psychometric scales, qualitative focus groups or biomarkers.

Results: The final collected data showed that distress has been increasing at an alarming rate among adolescents. They showed having high academic stress ranging from 68% to 88.3%, mainly caused by high-stakes competitive examinations (NEET/JEE) and pressure from parents. Body dissatisfaction affects up to 81.1% of the studied groups of adolescents. It showed a U-shaped curve where both underweight and overweight i.e., any adolescent who moved away from the center/correct BMI or body image expected by the society, felt high weight stigma. When academic anxiety was high, it triggered a long-lasting activation of the Hypothalamic-Pituitary-Adrenal (HPA) axis. This raised the cortisol levels and led to the failure of self-regulation among the students who were trying to control their eating habits or studies. This “ego depletion” gave rise to a physiological state where the students wanted to shift from whole foods to processed junk foods that gave them instant boost of energy and calories. This was their way of emotion-focused coping. The studies also showed that the rigid dieting increased BMI. This was seen as a paradoxical effect which increases depression risk by 41%, and triggers more binge-eating episodes.

Conclusion: It might not be outwardly visible but academic stress and weight problems in adolescents have a high probability to occur together during their most delicate time of development and growth. It is important to monitor their emotions and encourage schools and families to give them the proper psychological support to cope with these problems and not just stop with giving them stress about exams and marks. Schools must carry out regular programs like yoga, meditation as daily activities to reduce stress and increase self-esteem. This helps the students to manage their emotions during adolescence and avoid burn out during exam time.

Keywords: Academic Stress, Disordered Eating Behavior, Weight Stigma, Indian Adolescents, Body Image, Body Dissatisfaction, Subclinical eating disorders, Self-concept

Introduction

An adolescent's development period is a very important and delicate time where processes like rapid physical maturation and identity formation happen. Along with this their relationships with people around them, be it friends, family or elders shift drastically. Stress from academics, disordered eating behaviors (DEBs) like strict dieting, emotional eating or bingeing and weight stigma or body dissatisfaction do not occur individually at such a life stage. According to empirical evidence, this happens in a cycle where one of them leads to another and back and forth like a feedback loop. Difficult exams like board exams or competitive entrance tests (NEET and JEE) give the adolescents high academic pressure. On top of that expectations from parents and questions from neighbors turn into a chronic stressor for the adolescents. This triggers reactions in the neuroendocrine system of the body where it activates the Hypothalamic-Pituitary-Adrenal (HPA) axis. This raises cortisol levels in the body. Also if the adolescents are on a strict diet due to their insecurities or low self-concept about body weight or on a strict study-schedule to finish their syllabus, that can lead to ego depletion. This ego depletion turns into mental exhaustion. So when high cortisol is paired with this mental exhaustion, it directly affects the adolescent's appetite. This physiological response shifts the adolescent's food preference towards those that are very high in sugar, fats, salt to cope with their complex emotions. This is a form of emotion-focused coping for them.

Adolescents also have a hard time dealing with the pressure to fit into the society's preferred body image. Their family, friends or social media can put these thoughts into their young minds on purpose or by mistake. Those people around may make the adolescents feel like they are ugly or not enough or too bad to be validated by the society. This acts as another stressor which can make them turn to strict dieting and unhealthy eating habits or even emotional eating. This affects their BMI. More than the adolescents hearing these comments and suggestions about their weight, the real problem comes when those adolescents internalize those comments and believe them deeply. This leads to high body dissatisfaction. Even teachers and elders can contribute to this expression of weight stigma on purpose or by mistake through an action called microaggression. For e.g., teacher may purposely not include the overweight student in a class activity or every time a fun activity occurs in class. When these three pillars of issues are combined, they can lead to a major cycle of health problems that will affect the adolescents nowadays greatly.

Theoretical frameworks

Transactional model of stress and coping

The Transactional Model of Stress and Coping says that stress is a dynamic process arising from the interaction between an individual and their environment (Lazarus & Folkman, 1984). When a person considers a situation as threatening or exceeding their current available coping techniques or resources it results in the occurrence of stress. So in the context of Coimbatore's school-going teenagers, they see academic pressure and perceive it as

1. Primary appraisal (significance of the threat for e.g., parents pressuring to get top rank or more than 90 marks out of 100 in tough subjects) and
2. Secondary appraisal (adequacy of resources i.e., time constraints, assignment deadlines, energy or concentration decline, lack of interest in subject)

When the student perceives a deficit, the teenager turns to problem-focused coping (for e.g., arranging strict time table or changing sleep schedule to study more) or emotion-focused coping (for e.g., trying to feel better by eating high-calorie foods). Emotional eating becomes a psychological response where food pleasure temporarily offsets stress-generated negative affect.

Social cognitive theory and environmental determinism

Social Cognitive Theory (SCT) says that health behaviors result from reciprocal determinism between personal factors, environmental influences, and behaviors (Bandura, 1986). Self-efficacy acts as a personal factor for Indian teenagers. They observe peers and family members who model sedentary lifestyle and inactivity around them and learn the feeling of low efficacy or self-worth. There are also some environmental factors in Coimbatore like the huge number of fast-food outlets near schools (for e.g., opposite to Stanes School which is one of the biggest and most famous school in the city, lies the VOC park, which is in other words, a literal circle of ice cream shops, food trucks, Pani Puri stalls, circus/amusement park ground with cotton candy stalls, snacks and hotels like Denmark Inn, Peking). SCT suggests that interventions must target these types of environmental cues and help to shape more encouraging and supportive social networks to enhance efficacy through physical activity.

Self-regulation theory and impulse management

Self-Regulation Theory explains how individuals adjust thoughts and actions to achieve long-term goals, such as maintaining weight. This concept also says that self-regulation acts like a muscle that becomes tired under stress or high cognitive load and this process is known as ego depletion (Baumeister et al., 1998). This means that if a person is overwhelmed by stress, his/her ability to control temptations for high-sugar or high-fat foods becomes tougher. This failure leads to the "abstinence violation effect," where a small dietary mistake or slip leads to a huge binge due to perceived failure (Marlatt & Gordon, 1985). Therefore it is important to develop resilience through mindfulness and emotional regulation to have long-lasting healthy behaviors.

Physiological pathways and the hpa axis

The Hypothalamic-Pituitary-Adrenal (HPA) axis can turn the psychological experience of stress into physiological reality as chronic stress leads to sustained cortisol release, which impacts metabolic health (McEwen, 1998). Critical stress may suppress appetite for a while, but the prolonged cortisol rise can significantly increase cravings in a teenager for foods high in sugar, fat, and salt. Cortisol also deposits visceral adipose tissue (toxic fat) which is associated with high risk of disease. This makes it even more difficult for stressed teenagers to lose weight regardless of caloric restriction.

Methodology

This research is a Systematic Methods Literature Review. This study explores the concepts of stress, eating problems and resultant body dissatisfaction because of the weight stigma developed as a result of the stress and eating problems the adolescents face. This study aims to understand the psychological mechanisms like ego depletion and internalization of weight stigma that help bring these outcomes during their adolescence. This study followed the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to make sure the research process is transparent, reproducible, easy to double-check or repeat.

Inclusion criteria

The main sample included Indian adolescents who were enrolled in schools or colleges. The review collected studies that were conducted in India, covering both urban and rural settings e.g., studies from Chennai, Karnataka, Hyderabad, Delhi and a few studies were taken from outside India to compare the outcomes and effects on the adolescents living there. The studies reviewed measured at least one variable related to psychological stress such as academic pressure, exam anxiety, parental expectations and/or one variable related to eating behaviors/body image i.e., emotional eating, junk food consumption, body dissatisfaction, weight stigma. Empirical quantitative studies that used validated scales like Perceived Stress Scale, Three-Factor Eating Questionnaire, BMI and qualitative studies that had interviews or focus group discussions. Longitudinal studies and randomized controlled trials were also included in the review. Studies between 2016 and 2026 were included to understand the latest status of academics, stress, body image, eating behaviors in adolescents including the effects that from COVID-19 pandemic.

Exclusion criteria

Children under 10 years of age, adults or non-student working professionals or elderly people were excluded. Studies that focused only on clinical nutrition or metabolic disorders i.e., diabetes or obesity without measuring psychological stress or behavioral factors were not included in this review.

Table 1: Summary of Inclusion and Exclusion Criteria (PICOS Framework)

Criteria Category	Inclusion Criteria	Exclusion Criteria
Population (P)	Indian Adolescents (10–19 yrs)	Children under 10; Adults >25; Non-student populations.
Intervention / Exposure (I)	Academic stress, Exam pressure (NEET/board exams), pressure from parents about marks/performance, weight stigma, COVID-19 lockdown.	Clinical drug trials; Interventions unrelated to stress or diet.
Comparison (C)	Gender (Male vs Female); Stream (Science vs Commerce); BMI (Normal vs Overweight); Stress Levels (High vs Low).	Comparisons with non-human subjects or unrelated demographics.
Outcome (O)	Emotional eating, disordered eating behaviors (deb), body dissatisfaction, cortisol levels, bmi changes, mental health (anxiety/depression).	Outcomes focused only on exam marks without weight/health related outcomes.
Study Design (S)	Cross-sectional, longitudinal, qualitative, randomized controlled trials studies using validated scales.	Case reports (n=1), opinion pieces, editorials.

Information source:

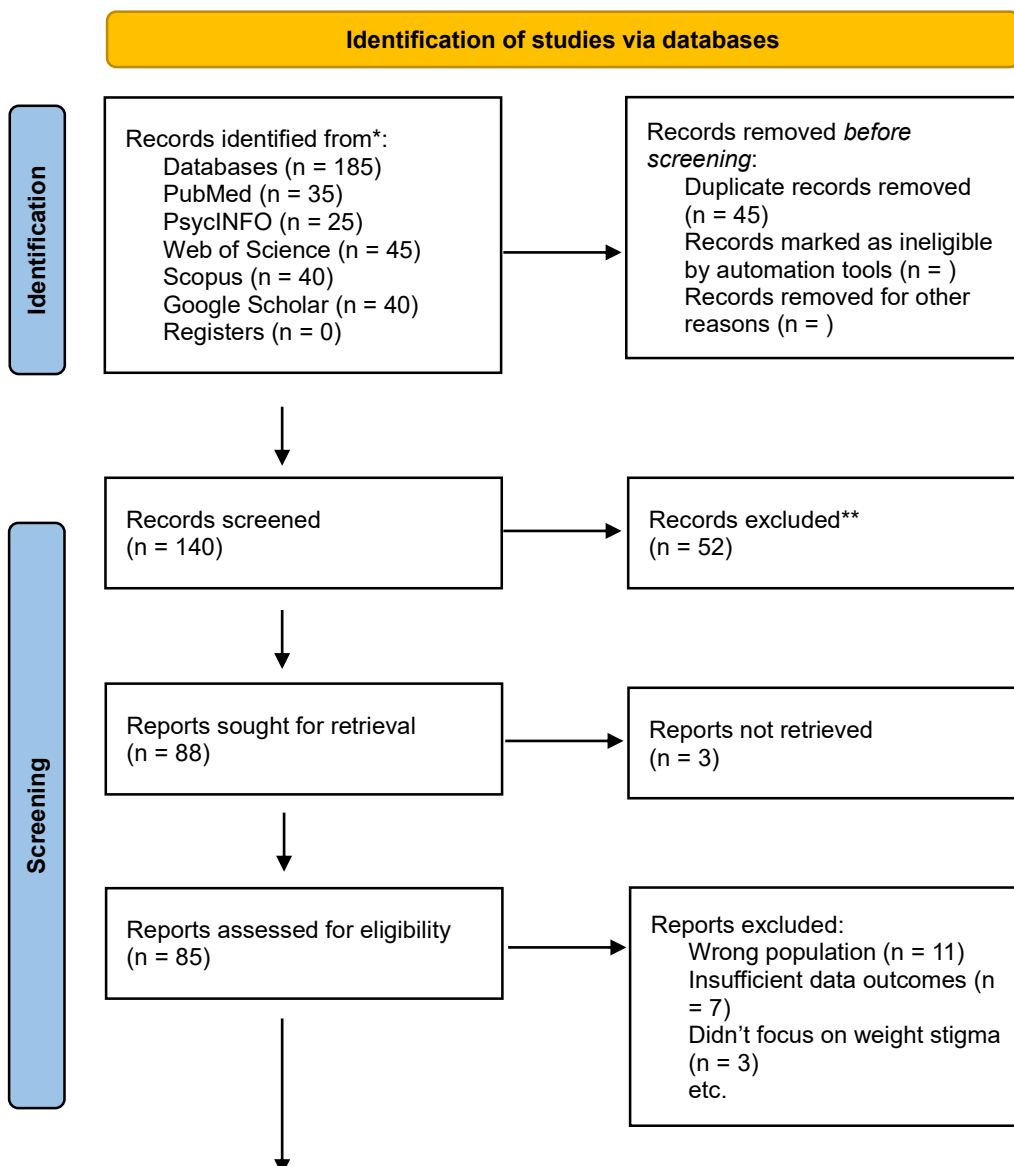
Studies were selected from PubMed, MEDLINE for biomedical and physiological studies that recorded the activity of HPA axis or measured cortisol levels, glycemic controls, salivary levels or BMI. PsycINFO (APA) was used for studies that had psychological scales and behavioral studies. Google Scholar was used

for retrieving regional Indian articles and journals that are not found in major western databases. Some other databases include Web of Science and Scopus.

Study selection and data charting

All the studies were first managed through Excel software. The duplicates were removed from the group of studies. Then a proper review of abstract and full-text was done to select potentially eligible articles. The studies were selected based on the PRISMA-ScR guidelines and is shown in the PRISMA-ScR flow diagram (Figure 1). So as a result, 59 articles met the eligibility criteria and were included in the final review. A properly designed form was used to extract data such as authors, type of research, assessment tools, methodology, key empirical findings, primary risk factors, topic classification from the total of 59 studies.

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only



Included

Studies included in review
(n = 64)
Reports of included studies
(n = 64)

Results

The findings in these studies mainly show a very high prevalence of psychological distress, body image issues, and disordered eating in the adolescents mostly in India. In these studies academic stress has been found to be a huge burden that gives 68% to 88.3% of students high stress. The studies found that this happens mostly because of high-stakes exams like NEET/JEE and high pressure from parents. Body dissatisfaction affects up to 77.6% to 81.1% of certain adolescent groups. The data shows strong bidirectional links where academic anxiety, social media idealization, elevated BMI, and bullying because of weight altogether lead to unhealthy coping mechanisms like binge eating, strict and unhealthy dieting, social withdrawal, and higher numbers of suicidal ideation among adolescents.

The studies used psychometric questionnaires and validated clinical scales. Academic and general mental stress were measured using the Perceived Stress Scale (PSS-10/PSS-14), the Kessler Psychological Distress Scale (K10), the Depression Anxiety Stress Scale (DASS-21), and the Educational Stress Scale for Adolescents (ESSA). For body image and eating, researchers used tools like the Eating Attitudes Test (EAT), the Three-Factor Eating Questionnaire (TFEQ), the Child Eating Disorder Examination Questionnaire (ChEDE-Q), and the Body Shape Questionnaire (BSQ-16B). A few studies also used qualitative framework analyses, focus groups, and biomarkers like salivary cortisol tracking to measure the survey data. Table 2 given below shows authors, design and sample, assessment tools/methodology, key findings, risk factors and topic classification.

Table 2. Study Characteristics of included reviews (n = 64)

Study Authors	Design & Sample	Assessment Tools / Methodology	Key Findings	Primary Risk Factors / Stressors Identified	Topic Classification
M. M. Singh, Parsekar, & Bhumika (2016)	Cross-sectional survey n=550 pre-university students in Udupi, Karnataka	Eating Attitudes Test (EAT), Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ)	31.09% showed a risk towards eating disorder celebrities and media influence greatly predicted their body image problems	Media exposure, celebrity idealization, perceived fatness	Disordered Eating Behavior & Weight Stigma
Correa et al. (2017)	Qualitative focus groups 13 FGDs (n=73)	Focus group qualitative thematic analysis	Urban Indian females felt academic stress and lack of time as	Academic workload, tight school schedules,	Academic Stress & Disordered

	adolescents in India & Canada)		main obstacles to healthy eating	unhealthy food being more available	Eating Behavior
Hand et al. (2017)	Cross-sectional correlational study n=300+ adolescents in 3 US states	Path analysis and multivariate regression	More than 90% scored positive for weight stigma/anti-fat bias stress and avoidant coping predicted extreme fasting and bingeing	Weight stigma internalization , avoidant coping under stress	Academic Stress, DEB & Weight Stigma
Jaisoorya et al. (2017)	Cross-sectional school survey n=7,560 students aged 12–19 in Kerala	Kessler Psychological Distress Scale (K10), self-administered questionnaire	10.5% mild, 5.4% moderate, 4.9% severe distress linked with older age, not living with one or both parents, substance use, sexual abuse, suicidality	Risk of academic failure, non-intact family structure, urban residence	Academic Stress
Ganesan, Ravishankar, & Ramalingam (2018)	Cross-sectional study college-going adolescent girls in South India	Quantitative body image scales, PHQ-9	77.6% had body dissatisfaction strongly linked to elevated BMI, pressure from society for thinness, and depression	High BMI, pressure to be thin, depressive symptoms	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image
Batabyal et al. (2019)	Longitudinal study 1st-year residential university students in India	Perceived Stress Scale (PSS-14), Kessler-10 (K10), Salivary cortisol biomarkers	Males adapted better and had declining cortisol/stress females maintained elevated stress hormones whole academic year	Academic pressure, female biological stress vulnerability	Academic Stress
Parikh et al. (2019)	Qualitative focus groups n=191 school adolescents aged 11–17	Framework analysis, semi-structured focus groups	High-stakes exams like board exams and NEET cause severe mental strain emotion-focused avoidant coping predominant	Board exams, national entrance tests (NEET), pressure from parents	Academic Stress

	in Delhi & Goa				
Rentala et al. (2019a)	Randomized controlled trial n=230 adolescent girls aged 16–19 in Dharwad, Karnataka	8-session holistic stress intervention, 6-month follow-up evaluation	Intervention significantly reduced academic stress, depression, anxiety, and general stress (partial eta-squared 0.13–0.16)	Academic workload, lack of psychological coping strategies	Academic Stress
Rentala et al. (2019b)	Cross-sectional study n=314 adolescent girls in 10 colleges in Dharwad, Karnataka	Demographics, personality scales, IQ tests, educational stress survey	Mean educational stress score was 50.04 ± 10.82 risk factors included introvert neuroticism and commerce stream	Introvert neuroticism, illiterate father, commerce academic stream	Academic Stress
R. Thomas, Priyadarshini, & Jeyalakshmi (2019)	Comparative descriptive study n=400 UG students in Udupi, Karnataka	Self-administered questionnaires	Professional students experienced higher stress than non-professionals weak positive correlation with uncontrolled eating	Demands of professional course, heavy syllabus	Academic Stress & Disordered Eating Behavior
N. Agarwal et al. (2020)	Cross-sectional evaluation youth aged 12–24 with Type 1 Diabetes	Perceived Stress Scale (PSS-10), one-way ANOVA, blood glucose tracking	Perceived stress directly made glycemic control worse stress highest in females, older youth, and those with salaries	Pandemic isolation, healthcare disruption, chronic disease burden	Academic Stress
S. Kumar et al. (2020)	Longitudinal study n=217 UG medical students in Chennai	Depression Anxiety Stress Scale (DASS-21), pre- vs mid-COVID tracking	Anxiety and stress increased during COVID-19 but depression stayed the same	Bad sleep quality, COVID-19 infection in family/friends, working directly with patients	Academic Stress

Mahapatra & Sharma (2020)	Narrative paper	Qualitative literature analysis of school closures	School closures created a unique educational crisis causing severe short- and long-term psychosocial morbidity	Lockdown disruptions, lack of educational continuity and special education	Academic Stress
Moitra, Madan, & Shaikh (2020)	Cross-sectional study n=527 adolescents aged 10–17 in Mumbai	PHQ-A, diet and sleep logs, anthropometric measurements	25% showed moderate-severe depression correlated with higher BMI, irregular family meals, and poor sleep	Higher BMI, not having structured family meals, sleep deprivation	Disordered Eating Behavior
Priyanka Pareek & Mehta Neha (2020)	Cross-sectional study n=300 female adolescents aged 15–18 in Hyderabad	Cohen's PSS, Food Frequency Questionnaire (FFQ), 24Hour Dietary recall (3-day), BMI	58.6% experienced stress 13% severe, 30% moderate and 15.6% mild stress, shifted diet toward fried, processed junk foods and away from fruits/vegetables	Stress-induced cortisol release, cognitive self-regulation depletion	Academic Stress & Disordered Eating Behavior
Preeti Khanna & B. Aeri (2020)	Cross-sectional survey n=546 Delhi public school adolescents	CBCL, TFEQ, Body Image Locus of Control, 24-hr recall, body fat %	33.51% depression, 27.47% anxiety cognitive restraint (+41% depression risk), breakfast skipping (up to 43x risk) U-shaped risk curve	Restrained eating, meal skipping, body image dissatisfaction	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image
Puhl & Lessard (2020)	Global systematic review	Comprehensive literature synthesis on weight victimization	Friends, family, and teachers teasing/commenting on weight greatly decreases self-worth and elevates suicidal ideation	Peer teasing, parental criticism, teacher microaggressions	Weight Stigma / Body Dissatisfaction / Body Image
S. Singh & Gadiraju (2020)	Cross-sectional study n=262	Self-report body image and eating	body dissatisfaction in 31% females and 22% males media pressure	Media pressure, athletic/thin ideal	Disordered Eating Behavior & Weight

	Indian youth aged 18–25	pathology scales	and BMI predicted disordered eating	internalization , high BMI	Stigma / Body Dissatisfaction / Body Image
Thakkar et al. (2020)	Longitudinal study	Longitudinal transactional modeling	High BMI was correlated with poor self-concept about appearance, girls showed lower social acceptance and happiness	BMI variations, peer victimization	Weight Stigma / Body Dissatisfaction / Body Image
Garbett et al. (2021)	Psychometric validation study urban Indian adolescents	Factor analysis, construct validation testing	Successfully adapted and validated the Body Esteem Scale for Adults and Adolescents for English-speaking Indian youth	Lack of culturally adapted body image measurement tools	Weight Stigma / Body Dissatisfaction / Body Image
Joseph et al. (2021)	Qualitative interview study n=16 adolescents and young adults in Mysore	Semi-structured in-depth interviews, thematic analysis	Stress viewed as universal academic pressure and family conflict identified as main factors of psychological distress	High academic expectations from parents, family conflict	Academic Stress
Trevethan et al. (2021)	Longitudinal 2-wave study n=282 Indian adolescents aged 13–18	Longitudinal reciprocal mediation analysis	Academic stress directly predicted increase in generalized anxiety and panic symptoms through physiological hyperarousal	Academic pressure, physiological hyperarousal	Academic Stress
Warnick et al. (2021)	Meta-analysis	Quantitative systematic synthesis	Found a significant link between weight stigma exposure and poorer mental health outcomes in youth	Weight stigma exposure, weight-based discrimination	Weight Stigma / Body Dissatisfaction / Body Image
Amirapu & Brady-Vanden Bos (2022)	Qualitative interview study n=10 female Indian	Online semi-structured interviews, thematic analysis	Pandemic lockdown intensified parental regulation of food and exercise, this made body image distress	Parental food and exercise control, confinement stress	Disordered Eating Behavior & Weight Stigma /

	university students		and disordered eating even worse		Body Dissatisfaction / Body Image
Kapasias et al. (2022)	Online cross-sectional survey n=630 higher education students in India	Structured online survey, ordered logistic regression	73% reported low/moderate academic satisfaction, 68% high stress, 38% felt high academic risk	Pandemic educational disruption, research strain, unstable family situation	Academic Stress
Kataria et al. (2022)	Mixed-methods study n=1,200 adolescents aged 15–19 in 3 countries	18 qualitative FGDs followed by CATI phone surveys	1 in 5 reported direct harm from weight stigma experienced by both overweight and underweight youth, bad health behaviors	Weight stigma from friends/family, deviation from weight norms	Weight Stigma / Body Dissatisfaction / Body Image
Mayya et al. (2022a)	Cross-sectional survey n=2,152 commerce students in Karnataka	Manipal Inventory of Academic Stress (MIAS), regression	25% showed high academic stress, main stressors were expectations from parents and lack of revision time	Parental expectations, questions about marks from neighbor, not enough revision time	Academic Stress
Mayya et al. (2022b)	Cross-sectional survey n=1,859 science students in coastal Karnataka	MIAS quantitative survey, ANOVA	26% of 12 th and 28% of 11 th std. students experienced high academic stress	Unable to cover huge syllabus, high pressure from parents to score	Academic Stress
Sravanti et al. (2022)	Clinic record review 10-year chart audit at NIMHANS	Standardized psychiatric chart abstraction	Anorexia nervosa clinic prevalence 0.07%, mean age 13.96 years, 88.5% had multiple psychosocial stressors	Dysfunctional family dynamics, acute environmental stress	Disordered Eating Behavior

Deb et al. (2023)	Cross-sectional online survey n=317 Indian youth during COVID-19	Factor analysis, stress, hope, and resilience inventories	87.0% felt medium to high stress during COVID-19. Stress lowered their hope.	Difficulty with online classes and changes to daily routines	Academic Stress
Ahuja et al. (2023)	Psychometric adaptation study n=385 urban Indian adolescents (mean age 13.4)	Shortened Child Eating Disorder Examination Questionnaire (ChEDE-Q)	Validated the ChEDE-Q in India, scores correlated significantly with body image distress, depression, and anxiety	Culturally unadapted diagnostic tools, body image distress	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image
Jena et al. (2023)	Scoping review 33 studies (n=20,566 Indian adolescents)	JB I scoping review protocol	Eating more fried, sugary, and fast foods strongly driven by influence of friends, habits of parents, media, and emotional state	Peer pressure, commercial media advertising, emotional eating	Disordered Eating Behavior
Kakar et al. (2023)	Cross-cultural study adolescent girls in Australia, China, India, & Iran	Tripartite Influence Model path analysis	Indian girls reported the highest family and peer pressure to look attractive, directly driving body dissatisfaction and DEBs	Family and peer appearance pressures, media ideals	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image
Lewis-Smith et al. (2023)	Cluster randomized controlled trial school adolescents in Delhi	Evaluated culturally adapted school body image program	Intervention made improvement in body image, self-esteem, and decrease in disordered eating behaviors	Pressure from society to look good, when body dissatisfaction is not talked about openly	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image

H. Ranjani et al. (2023)	Controlled intervention trial (5–6 months) n=2,000 students aged 13–15 in Chennai	ADOS, salivary cortisol, BP, blood glucose, lipids, LCT	17-week yoga program significantly reduced psychological/physiological stress and improved concentration and health	Chronic academic stress, physiological hyperarousal	Academic Stress
Steare et al. (2023)	Systematic review 52 global studies (PROSPER O registered)	Search in ERIC, MEDLINE, PsycINFO, Web of Science	48 of 52 studies linked academic pressure and school-year timing directly to depression, anxiety, self-harm, and suicidality	High-stakes exam timing, high academic workload	Academic Stress
Cherian et al. (2024)	Paper and pencil survey n=8,542 UG/PG students in 15 Indian cities	PHQ-9 (Depression), GAD-7 (Anxiety)	33.6% moderate-severe depression, 23.2% anxiety, 18.8% lifetime suicidal ideation, 6.7% lifetime suicide attempts	Changing schools or colleges, high academic demands	Academic Stress
Deshmukh & Oka (2024)	Cross-sectional school survey n=2,089 adolescents aged 13–17	Actual anthropometry, MBSRQ, Stunkard scale	66.4% had body shape dissatisfaction, boys wanted bigger muscular body and girls wanted thinness, unnecessary dieting was very common	Gender-specific body preferences, body changes during puberty	Weight Stigma / Body Dissatisfaction / Body Image
Mohapatra, Pemde, & Kataria (2024)	Cross-sectional hospital-based OPD study n=180 adolescents aged 10–18	SQ-EDS, Photographic Figure Rating Scale, MINI-KIDS	81.1% body dissatisfaction, 32.2% psychiatric symptoms, 17.2% subclinical DEBs females had 7.89x higher DEB risk	Gender ideals, high BMI, underlying body dissatisfaction	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image
Pavitra Bajpai (2024)	Narrative review paper	Literature review synthesis	Negative body image directly undermines self-worth, triggering broader anxiety,	Societal appearance pressure, low self-esteem	Weight Stigma / Body Dissatisfaction

			depression, and social withdrawal		ion / Body Image
Pienyu, Margaret, & D'Souza (2024)	Cross-sectional survey n=570 entrance exam students in Karnataka	Validated academic stress, parental pressure, and anxiety scales	86.0% high stress, 87.0% high pressure from parents, 28.5% anxiety, 57.7% low overall well-being	Competitive entrance tests (NEET/JEE), expectations from others parents	Academic Stress
Senapati et al. (2024)	Scoping review 35 studies on Indian adolescent suicide	Multi-database scoping review protocol	Adolescent suicide increasing academic stress was found as a risk factor in 22.85% of included studies	Academic failure, declining grades, exam uncertainty	Academic Stress
Vaidyanathan & Menon (2024)	Comprehensive narrative review	Synthesis of Indian feeding and eating disorder literature	Found pattern of rising ED prevalence in India, main risk factors include female gender, higher socioeconomic status, family history, and personality traits	Sociocultural transitions, rapid urbanization	Disordered Eating Behavior
Zancu & Diaconu-Gherasim (2024)	Cross-sectional study n=406 early adolescents aged 11–13	Self-report measure and Path analysis	Bullying forced internalization of weight bias, negatively affecting body esteem and leading to anxiety, depression, and DEBs	Weight bias internalization, friends teasing during early puberty	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image
Al-Jubouri et al. (2025)	Descriptive cross-sectional study n=1,200 schoolgirls	Rosenberg Self-Esteem Scale, Weight Self-Stigma Questionnaire	Weight self-stigma moderately negatively correlated with self-esteem ($r = -0.404$), higher BMI predicted higher stigma	High BMI, internalized weight self-stigma	Weight Stigma / Body Dissatisfaction / Body Image
Anwar et al. (2025)	Cross-sectional study young	Quantitative body image distress scale	High psychological distress was observed in both obese and	Weight status, different from socially and	Weight Stigma / Body

	adults in India		underweight participants because of body weight differences	culturally ideal body/weight types	Dissatisfaction / Body Image
Choudhary et al. (2025)	Cross-sectional study n=538 school teenagers aged 10–16 in Punjab	Three-Factor Eating Questionnaire (TFEQ), Piers-Harris Scale	High cognitive restraint led to higher BMI/obesity, high BMI correlated with lower self-concept about appearance and happiness	Ego depletion because of strict dieting, high BMI	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image
Craddock, Phoenix, & White (2025)	Cross-sectional study UK Black and South Asian adolescents	Quantitative multivariate regression	Colorism significantly predicted lower body esteem and self-esteem in South Asian adolescents	Colorism, appearance discrimination	Weight Stigma / Body Dissatisfaction / Body Image
Das, Alat, & Sebastian (2025)	Two-study design: network analysis (n=407) & 1-year 4-wave longitudinal (n=164)	Network analysis, longitudinal reciprocal structural models	PsyCap and mindfulness indirectly reduced academic distress by improving affect balance and academic performance also got better due to engagement, not affect balance alone	Academic disturbances due to COVID-19, loss of academic engagement	Academic Stress
Darling et al. (2025)	Qualitative secondary analysis 29 low-income adolescents & 26 caregivers	Qualitative thematic analysis	Weight stigma was common in daily life and medical consultations, leading to chronic stress	Low socioeconomic status financial strain, clinical weight bias in healthcare	Weight Stigma / Body Dissatisfaction / Body Image
Haritay et al. (2025)	Cross-sectional survey n=1,426 students aged 13–15 in Belagavi, Karnataka	Educational Stress Scale for Adolescents (ESSA)	74% reported high academic stress, boys exhibited higher anxiety because of marks than girls	Anxiety about marks, heavy daily school workload, fear of failure	Academic Stress

Khumanlambam et al. (2025)	Cross-sectional survey n=861 school adolescents in Imphal, Manipur	ESSA, PHQ-8, PHQ-A item 9, mediation analysis	88.3% high academic stress, 41.7% depression, 43.9% suicidal ideation depression mediated 51% of stress-suicide link	Heavy academic stress, major depressive symptoms	Academic Stress
S. Kini B. et al. (2025)	Cross-sectional study n=382 college students in coastal Karnataka	BSQ-16B, Rosenberg Scale, PHQ-9, HARS, Stunkard scale	73.03% negative body perception dissatisfaction followed U-shaped curve (overweight 3.29x, obese 2.96x, underweight 1.55x risk)	Deviations from normal BMI, low self-esteem, anxiety	Weight Stigma / Body Dissatisfaction / Body Image
Lewis-Smith et al. (2025) / Lewis-Smith et al. (2022)	Cluster RCT semi-rural Indian secondary school students	Teacher-delivered comic intervention evaluation	Comic intervention improved body esteem and reduced eating pathology, exam stress found as worse risk factor over follow-up	Exam period stress, sociocultural appearance pressures	Academic Stress, DEB & Weight Stigma
Perumalsamy et al. (2025a)	Cross-sectional study n=150 high school students in Chennai	Perceived Stress Scale (PSS)	69.33% experienced moderate stress, stress correlated with emotional regulation deficits, boys in joint families highest	Emotional regulation deficits, complex joint family dynamics	Academic Stress
Perumalsamy et al. (2025b) / Radhakrishnan et al. (2025)	Qualitative study n=15 high school students in Chennai	In-depth interviews, purposive sampling, thematic analysis	High school costs and study load led to coping methods like drug use and exercise	Low family income, long tuition hours, entrance test strain	Academic Stress
Rajpurohit et al. (2025)	Cross-sectional study undergraduate students in India	Quantitative eating attitude survey	Found that being seen as overweight, having anxiety, depression, and high social media use significantly predicted eating disorder risk	Being perceived as overweight, heavy social media consumption	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image

Roy, Biswas, & Sharma (2025)	Scoping review of 15 reviews (2015–2024)	Socio-Ecological Model synthesis	Multi-level factors of distress led to a joint system intervention instead of individual resilience training alone	Academic pressure, financial strain, mental health stigma	Academic Stress
Batish et al. (2026)	Cross-sectional study students aged 6–16 in Amritsar, Punjab	Quantitative school survey	Overweight/obese students faced weight loss suggestions, 53.2% had social impairment, 29.9% reported sadness, and bullying was common	Weight-based bullying, negative weight perception	Weight Stigma / Body Dissatisfaction / Body Image
Mahra et al. (2026)	Cross-sectional study n=3,150 undergraduates in 6 Indian regions	Structured survey, Principal Component Analysis, anthropometry	Emotional eating and external cues predicted higher BMI, properly structured dietary habits and positive affect were protective. Many of them skipped meals & breakfast	External eating cues, emotional regulation problem	Disordered Eating Behavior
Praveen et al. (2026)	Mixed-methods school study adolescents in Bhubaneswar, Odisha	Quantitative survey and qualitative interviews	Adolescent girls had lower self-esteem, problems with friends were highly common in groups	Gender vulnerability, friendship strains	Weight Stigma / Body Dissatisfaction / Body Image
Sehrawat et al. (2026)	Cross-sectional study young adults in India	Quantitative health behavior survey	Experienced, anticipated, and internalized weight stigma were linked with very unhealthy weight control behaviors and binge eating	Experienced and internalized weight stigma	Disordered Eating Behavior & Weight Stigma / Body Dissatisfaction / Body Image
S. V. Sruthi Sree et al. (2025)	Qualitative socio-ecological study adolescents in urban,	Art-based methods (drawings, emojis), Bronfenbrenner analysis	Urban adolescents utilized "eye-eating" as coping, junk food linked to guilt emojis/feelings and	Peer/media influence, street food availability, working parents	Disordered Eating Behavior

	rural, slum Tamil Nadu		home food linked to comfort emoji		
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Discussion

Academic stress in students was very high. The rates reached 74% in Karnataka (Haritay et al., 2025), 86% among entrance exam students (Pienyu et al., 2024), and 88.3% in Manipur (Khumanlambam et al., 2025). Academic strain is directly linked to clinical depression, generalized anxiety, and panic attacks. These effects are driven by physiological hyperarousal (Trevethan et al., 2021; Cherian et al., 2024). There were a few global and local scoping reviews in this review and they identified academic pressure, lowering grades, and high-stakes exams and school timing as main risk factors in 22.85% of adolescent suicide cases (Senapati et al., 2024; Steare et al., 2023). Separate or individual workloads don't act as the underlying triggers according to these studies, instead the main factors include high-stakes national competitive exams (NEET/JEE), extreme expectations from parents, fear of failure, financial problems. But the main problem is the lack of proper psychological support in schools to help these children cope with these academic stressors in a healthy way (Parikh et al., 2019; Joseph et al., 2021; Perumalsamy et al., 2025b). The COVID-19 pandemic made these factors and effects even worse. Changes in routines because of disruptions in school schedules, being too lazy to learn online, and sudden shifts in exam dates led to sudden increase in anxiety and a decrease in academic satisfaction (S. Kumar & Ardhanaari, 2020; Kapasia et al., 2022; Deb et al., 2023).

The number of studies and the results where adolescents are not happy with their bodies is remarkably high. The percentages are 66.4% to 81.1% in adolescents in a study (Deshmukh & Oka, 2024; Mohapatra et al., 2024), and 73.03% in college students (S. Kini B. et al., 2025). The results found were mostly gender-specific where boys wanted muscular and bigger bodies and girls wanted thinner body. It was also found that body dissatisfaction showed a U-shaped curve. This means that both overweight and underweight adolescents had similar severe psychological distress, self-stigma about their own weight and low self-esteem when their bodies went away from rigid cultural weight norms (Kataria et al., 2022; Anwar et al., 2025; S. Kini B. et al., 2025).

It was seen that weight-based teasing, bullying, and microaggressions came from three types of people i.e., friends, parents, and teachers (Puhl & Lessard, 2020). Cross-cultural studies showed that Indian girls face the highest level of family and peer pressure to look attractive. This decreased their self-worth and led them to withdraw from social circles. (Kakar et al., 2023; Pavitra Bajpai, 2024). Seeing celebrities as ideals and heavy social media consumption were found to be powerful predictors of body image distress (M. M. Singh et al., 2016; Rajpurohit et al., 2025). Discriminating based on their skin color also made body esteem worse in adolescents (Craddock et al., 2025). It was seen that when academic stress was high it made the students directly move away from nutritious foods like fruits and vegetables or whole foods and go towards packaged high-fat, fried, processed junk foods that give them instant energy (Priyanka Pareek & Mehta Neha, 2020; Jena et al., 2023). This happens because when adolescents are stressing over marks and academic problems, their cortisol levels go up. This makes their cognitive self-regulation go down. The studies also found that when adolescents feel dissatisfied with their body they practice unhealthy methods like extreme fasting, dieting and meal skipping. This unhealthy and sudden change in diet leads them towards ego-depletion which results in a vicious cycle. The more the cognitive restraint the higher BMI. It leads to 41% increased risk of depression and up to a 43x higher risk of breakfast skipping. This also triggers severe binge-eating episodes (Hand et al., 2017; Preeti Khanna & B. Aeri,

2020; Choudhary et al., 2025). Qualitative studies showed that when they measured emotional states of urban adolescents towards junk food, they showed the guilty “emoji” and when the rural adolescents’ responses were measured, they showed the “comfort” emoji because the rural adolescents had home-cooked meals (S. V. Sruthi Sree et al., 2025).

The success of the holistic stress program by Rentala et al. (2019) proved that it is important to add planned and structured psychological coping program in the school and college time tables. Teachers should help students learn the different task-oriented coping skills when they are nearing exams or on a general schedule. This will help them tackle depression and anxiety. The large-scale study by H. Ranjani et al. (2023) of 2,000 students showed that the 17-week yoga program directly reduced academic stress. This shows the importance of adding mind-body practice like yoga or meditation as a daily activity. This will help to reduce salivary cortisol, lower their blood pressure and increase concentration in classroom. Das, Alat, and Sebastian (2025) also showed that using specific techniques like “PsyCap” beyond basic relaxation techniques helps to grow and nurture qualities like hope, resilience, optimism and academic engagement. This helps the adolescents to handle their emotions effectively. This will help them avoid burning out in the long run during exam seasons. Lewis-Smith et al. (2022/2025) proved that when students were given comics by teachers about how to tackle body image, color and gender issues it improved their body esteem and brought their disordered eating behavior in control. These risks of weight stigma and body dissatisfaction get worse during exams so it is advised to use these interventions right before exams to prevent the students from falling into the trap of weight stigma and disordered eating.

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