KPMG

Cost of Appearance Ideals

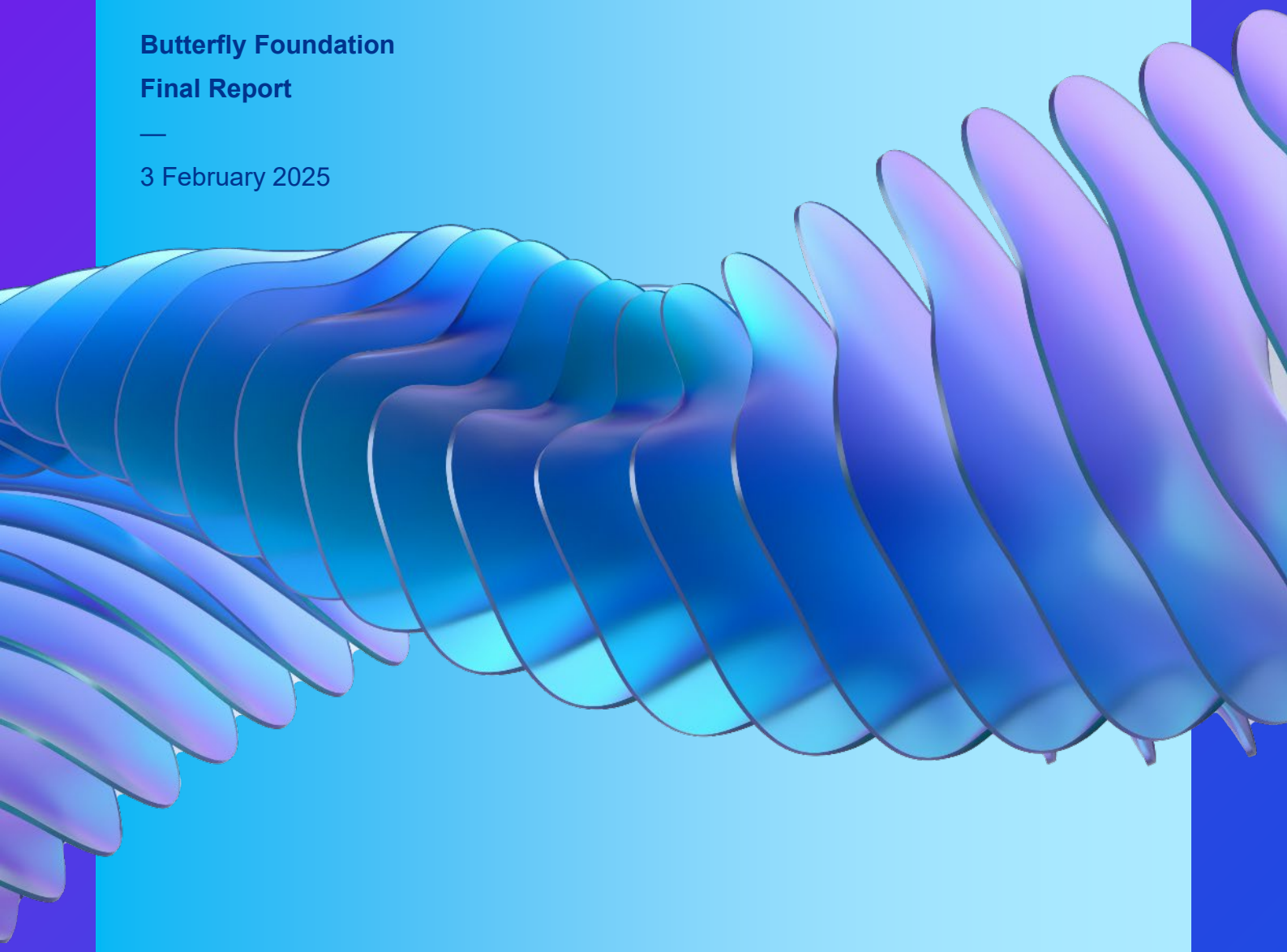
The economic and social impact of body dissatisfaction and weight-based discrimination

Butterfly Foundation

Final Report

—

3 February 2025



Content warning

This report contains discussion of eating disorders and body image concerns. If you, or someone you know, is struggling to feel good in your body, or if your thoughts about your body, eating, or exercise feel overwhelming, please speak to someone; a trusted adult or friend. Not sure where to start or what to say? Free and confidential support is available from experienced health professionals at the Butterfly National Helpline by phone,1800 33 4673 (1800 ED HOPE), or visit www.butterfly.org.au to chat online or email, 7 days a week, 8am-midnight (AEST/AEDT). In a crisis, call Lifeline on 13 11 14 or 000 in an emergency.

Acknowledgement of Country

KPMG and Butterfly Foundation acknowledge the Aboriginal and Torres Strait Islander peoples as the First Peoples of Australia. We pay our respects to Elders past, present, and future as the Traditional Custodians of the land, water and skies of where we live and work.

Acknowledgement of Lived Experience

We acknowledge people with living and lived experiences of eating disorders, disordered eating, and body image concerns, including carers, families and supporters. We especially acknowledge the individuals who generously shared their lived experience wisdom for this report. Butterfly recognises the value of lived experience as a form of knowledge and a force for creating positive change to ensure that those living with an eating disorder can access care and support.

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Foreword

3 February 2025

This report extends beyond our 2024 publication Paying the Price[1], which examined the economic and social costs of eating disorders. This groundbreaking study explores new territory, measuring the prevalence and impact of body dissatisfaction and weight-based discrimination across Australia, providing fresh insights into appearance-related social challenges and costs.

The Cost of Appearance Ideals provides a national snapshot of the economic and social impact of body dissatisfaction – the first of its kind. Body dissatisfaction is a key risk factor for the development of many types of eating disorders, along with other conditions such as anxiety, depression, substance use, and smoking. The report also quantifies the impacts and costs associated with weight-based discrimination across multiple domains that people living in larger bodies have communicated is a regular occurrence, such as access to healthcare and employment.

The report estimates that in the last 12 months over 4.1 million people in Australia aged 15 years and over are significantly affected by body dissatisfaction, while over 3.1 million have experienced appearance-based discrimination – including weight-based discrimination.

Experiences of body dissatisfaction are not evenly spread across the Australian community. Women and girls experience the highest levels of body dissatisfaction compared to males across all age groups, while bisexual and other cohorts within the LGBTQIA+ community also have higher rates of body dissatisfaction.

The report shows that experiences of appearance-based discrimination in Australia are incredibly diverse and are more common among teenagers, particularly among teens who are higher weight, same-sex attracted, and Indigenous. People born with a sex variation, people identifying as LGBTQIA+, and those who speak languages other than English, also experience higher rates of appearance-based discrimination.

When considering the impacts associated with both body dissatisfaction and appearance-based discrimination, the annual economic and social cost is estimated as:

- Body dissatisfaction $36.6 billion
- Weight-based discrimination $27.6 billion.

As with Paying the Price 2024, this report comes at a critical point in the Australian policy landscape, with the:

- Implementation of the National Eating Disorders Strategy 2023-2033[2] well underway,
- The release of eating disorder strategies in Victoria[3] and Western Australia[4] ,
- The promotion of the National Eating Disorders Collaboration's Eating Disorder Safe Principles[5],
- Ongoing government investment in Butterfly Foundation's Butterfly Body Bright[6] primary school program,
- The launch of Butterfly's new secondary school program to support body image safety online – BodyKind Online Education[7].

This activity sits within a broader trend across the mental health sector for greater recognition of – and greater investment in – mental health promotion and prevention. As collective momentum among non-government organisations for a shift in policy focus grows, so too does the demand for evidence of community need and knowledge of the full impact of the social and economic determinants of mental ill-health.

Paying the Price 2024 painted a stark picture of the increasing prevalence of eating disorders and the cost of inaction. Treatment and care remain critical, with over 1.1 million people in Australia affected every year. Investing in prevention at a level commensurate with the scale of the problem offers an opportunity to reduce future suffering and the potential for significant savings to governments, businesses, communities, families and individuals.

The pages that follow provide independent economic analysis of the prevalence of body dissatisfaction and weight-based discrimination, along with an exploration of the economic and social costs associated with these experiences.

The report's quantitative and qualitative analysis is grounded in the daily reality of those with lived experience, including the 2,471 survey respondents from across Australia, and the advice of a Lived Experience Advisory Group.

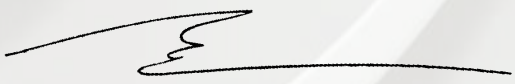
I thank those who shared their diverse range of experiences with us, and hope that as readers of this report that you see your truth reflected in the findings.

I also acknowledge the assistance of an Expert Advisory Panel made of up of researchers and clinicians and acknowledge the many others whose work in this field has formed the foundation for the report.

As the report authors conclude, the magnitude of these economic and social costs creates a compelling case for addressing body dissatisfaction and appearance-based discrimination within the mental health system and beyond, including public health policy and practice, and school-based health and wellbeing programs.

There is much work to do to address this problem, particularly in relation to multiple forms of appearance-based discrimination, including filling data gaps so that the diversity of experiences can be understood and addressed.

I commend this report to all who care about our nation's health and wellbeing. I hope that it will be the catalyst for both the political will and collective community action required to reduce the cost of appearance ideals in Australia.



Michael Same

Board Chair, Butterfly Foundation

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Definitions

Appearance-based discrimination	The unjust, prejudicial treatment of somebody purely on the basis of their appearance. This can be based on any physical feature of a person and can occur in various settings including education, employment, and provision of government or other services, such as healthcare. In the Australian context, this includes discrimination based on weight, skin tone, natural hair, cultural dress or appearance, and visible tattoos or piercings.
Body dissatisfaction	Having negative feelings and thoughts towards one's own physical appearance, influenced by harmful appearance ideals prevalent in Australian society. It stems from a perceived discrepancy between an individual's ideal state of appearance (i.e., an appearance ideal) and their actual physical appearance. In Australia, this is influenced by Western beauty standards, beach culture, and the emphasis on outdoor lifestyles.
Hair discrimination	The unfair or prejudicial treatment of an individual based on the texture, style, or natural state of their hair. This form of discrimination often targets individuals with textured, curly, or Afro hair, particularly within African, Indigenous, and other culturally diverse communities, and Aboriginal and Torres Strait Islander communities.
Height discrimination	The unjust treatment of individuals based on their height, whether perceived as too short or too tall according to appearance ideals.
Lived experience	This term encompasses: (i) individuals with personal experience of a mental health condition, which may involve using mental health services and experiencing either periods of recovery or full recovery; and (ii) individuals who have cared for or supported someone dealing with a mental health condition. In this report, lived experience specifically refers to personal experiences of body dissatisfaction and/or appearance-based discrimination.
Racial discrimination	The unfair or prejudicial treatment of someone on the basis of race or ethnicity.
Obesity	Medical term based on the body mass index for people living in larger bodies. The term is used extensively in the source literature and data inputs; however, we acknowledge the limitations and critique of the term, including how it can contribute to weight stigma and discrimination, particularly for people in larger bodies. Unless citing from a source, this report avoids use of this term in favour of alternative terminology for people living in larger bodies, in line with advice from people with lived experience.
Skin shade discrimination	The unfair or prejudicial treatment of an individual based on the shade or tone of their skin, often referred to as "colourism." This occurs within and between racial or ethnic groups and is rooted in historical and cultural biases that favour lighter skin tones. In the Australian context, this may particularly affect Aboriginal and Torres Strait Islander peoples and other communities of colour in social, economic, and cultural contexts.
Weight-based discrimination	The unfair treatment, stereotyping, or prejudice directed toward individuals based on their body weight or size. This form of discrimination often manifests in various settings, including the workplace, healthcare, education, and social interactions. It can include behaviours such as teasing, exclusion, biased hiring practices, denial of services, and derogatory comments.

Glossary

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
BAS-2	Body Appreciation Scale-2
BMI	Body Mass Index
CPI	Consumer Price Index
DALYs	Disability Adjusted Life Years
EAP	Expert Advisory Panel
GRADE	Grading of Recommendations Assessment, Development, and Evaluation
HREC	Human Research Ethics Committee
HR	Hazard Ratio
LEAG	Lived Experience Advisory Group
LGBTQIA+	Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual
OR	Odds Ratio
PAF	Population Attributable Fraction
RR	Relative Risk
UWCB	Unhealthy Weight Control Behaviours
VSLY	Value of a Statistical Life Year
YLD	Years of Healthy Life Lost due to Disability
YLL	Years of Life Lost due to Premature Death

01 Executive summary

It is estimated that over 4.1 million (18.9%) people aged 15 years and over are significantly affected by body dissatisfaction, while over 3.1 million (13.8%) have experienced appearance-based discrimination in the previous 12 months. Of those who experienced appearance-based discrimination, 49.3% did so on the basis of their weight.

When considering the impacts associated with both body dissatisfaction and weight-based discrimination, the annual economic and social cost is estimated as $36.6 billion and $27.6 billion, respectively.

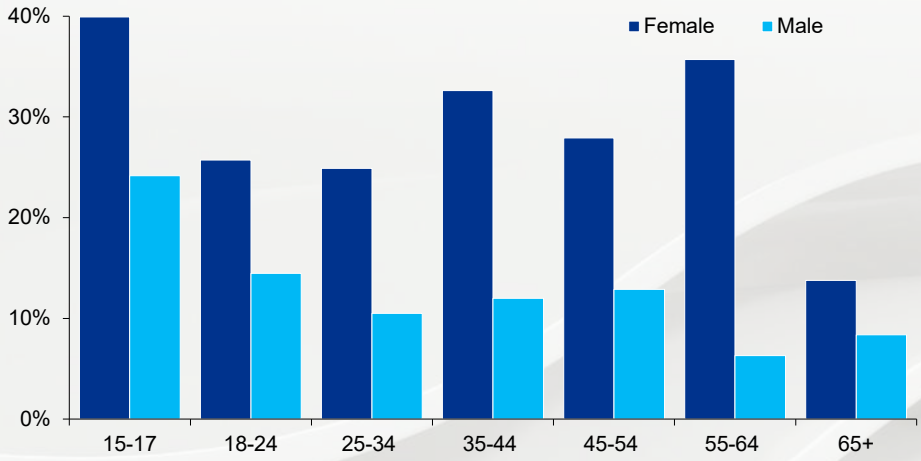
Body dissatisfaction and weight-based discrimination are key contributors to the development of eating disorders and increase the risk of other mental health conditions such as depression, anxiety, and self-harm[8]. Additionally, these factors, along with other forms of appearance-based discrimination, negatively affect physical health, lead to social withdrawal, and contribute to healthcare avoidance, which have devastating impacts on a person's overall quality of life[9]. When considered together, these factors also have substantial economic consequences, particularly in terms of healthcare costs and reduced workforce participation and productivity.

Of the 4.1 million people aged 15 years and over who are significantly affected by body dissatisfaction, there is variability in dissatisfaction between age groups and genders.

As shown in Figure E.1., females experience higher levels of body dissatisfaction compared to males across all age groups, with dissatisfaction being highest among teenagers and in late middle life, peaking at 39.9% in the 15 to 17 age group and again 35.7% in the 55 to 64 age group. Adolescent girls experience high levels of body dissatisfaction for several reasons, including physical changes during puberty, societal pressures to be thin or muscular, and peer comparisons[10].

For males, consistent with females, the highest prevalence of dissatisfaction was observed in those aged 15 to 17 (24.2%). Dissatisfaction rates decrease for males aged 18 to 34, before a gradual increase until age 54. Prevalence then declines in males aged 55 to 64 to 6.3%, before rising slightly to 8.4% in the 65+ group. This suggests that males may also experience rising dissatisfaction as they age, particularly as they face pressures related to physical fitness, muscle mass loss, and weight gain, which may intensify after age 54[13].

Figure E.1. Prevalence of body dissatisfaction in Australia, by age and gender, 15 years and older



Source: KPMG analysis

Note: The Appearance Ideals Survey was distributed through PureProfile to individuals aged 18 and older and through Butterfly channels to those aged 16 and older. PureProfile data was primarily used for quantitative prevalence estimates, while Butterfly data provided insights into lived experiences. Prevalence data in this report is occasionally presented for slightly different age groups due to the survey's two collection methods—PureProfile and Butterfly. Additionally, as the Butterfly data was not representative of the Australian population, its use was limited to capturing lived experience rather than prevalence estimates.

Executive summary

Exposure to unrealistic body images on social media and teasing further exacerbate these feelings[11]. Evidence looking at body dissatisfaction later in life, suggests this may be influenced by changing societal expectations and growing concerns about aging, often reinforced by media portrayals of unattainable body ideals[12].

Among individuals experiencing body dissatisfaction, the Appearance Ideals survey revealed that 72.5% aspired to have a more muscular physique (see Appendix B, Figure B.4), while 88.9% expressed a desire to be thinner or leaner (see Appendix B, Figure B.5), emphasising the impact of societal beauty standards.

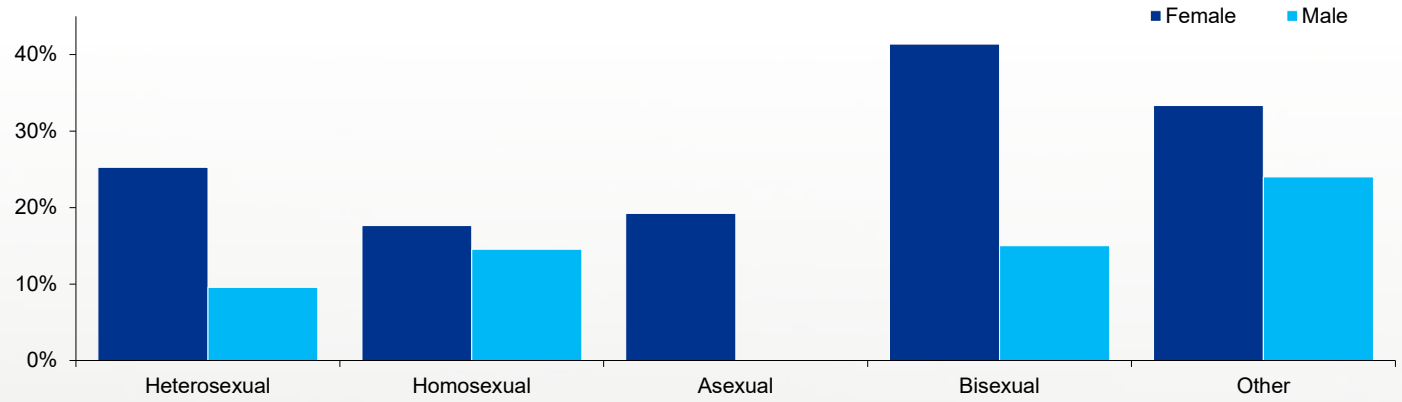
Body dissatisfaction is also found to be particularly prevalent among bisexual individuals within the LGBTQIA+ community, along with individuals identifying as 'Other' which includes individuals who identify as pansexual and queer (Figure E.2).

Higher rates of body dissatisfaction within the LGBTQIA+ community is consistent with other research, including He et al. (2020)[14], who report that LGBTQIA+ identifying males experience higher levels of body dissatisfaction than their heterosexual counterparts, as they often feel the need to meet both LGBTQIA+ and heterosexual beauty standards. When compared to other demographic groups in the Appearance Ideals Survey, such as individuals born with sex variation or from non-English-speaking households, LGBTQIA+ females reported the highest prevalence of body dissatisfaction (see Appendix B, Figure B.3).

It is estimated that over 3.1 million people or 13.8% of the Australian population aged 15 years and over have experienced appearance-based discrimination in the previous 12 months. Of those who experience appearance-based discrimination, 49.3% do so on the basis of their weight.

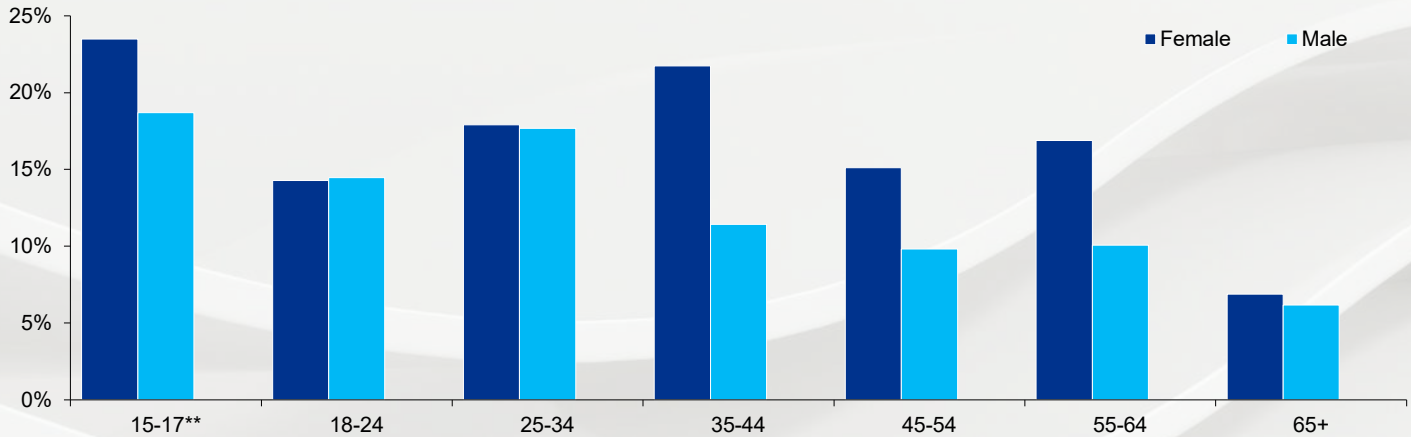
As shown in Figure E.3, the proportion of people living in Australia aged 15 to 17 years reporting appearance-based discrimination is higher than most other cohorts.

Figure E.2. Prevalence of body dissatisfaction in Australia, by gender and sexual orientation, 18 years and older*



Source: KPMG analysis

Figure E.3. Prevalence of appearance-based discrimination, by age and gender, 15 years and older



Source: KPMG analysis

*No survey responses were received from individuals identifying as male and asexual.
**The data for 15-17-year-olds is based on 14-15-year-old estimates and has been evaluated and used after comparison with other estimates.

Executive summary

The higher rate of appearance-based discrimination in Australian teenagers may, in part, be due to this age group spending most of their time in a school environment, where other problematic behaviours such as bullying are seen at high rates.

A study by the Anti-Bullying Alliance highlights that appearance-targeted bullying is prevalent among school-aged children, often intersecting with other forms of discrimination.[15]

Experiences of appearance-based discrimination are found to be more common in certain population groups. As reported by the Longitudinal Study of Australian Children (LSAC), in teenagers, appearance-based discrimination is particularly high among higher weight teens (43%), same-sex attracted teens (55.8%) and Indigenous teens (40.4%)[16] .

People born with a sex variation, identifying as LGBTQIA+ and those who speak languages other than English, are also found to experience higher rates of appearance-based discrimination. Research from La Trobe University's Australian Research Centre in Sex, Health and Society (2021)[17] shows that LGBTQIA+ individuals, especially gender non-conforming people, experience higher rates of discrimination linked to their appearance. Research by the Diversity Council Australia (2023)[18] highlights that people from culturally and linguistically diverse backgrounds, particularly those who do not conform to mainstream appearance ideals, are more likely to experience discrimination in both social and professional settings.

When considering appearance-based discrimination between genders, as shown in Figure E.4, there are differences between genders regarding the physical feature considered to be the basis for discrimination.

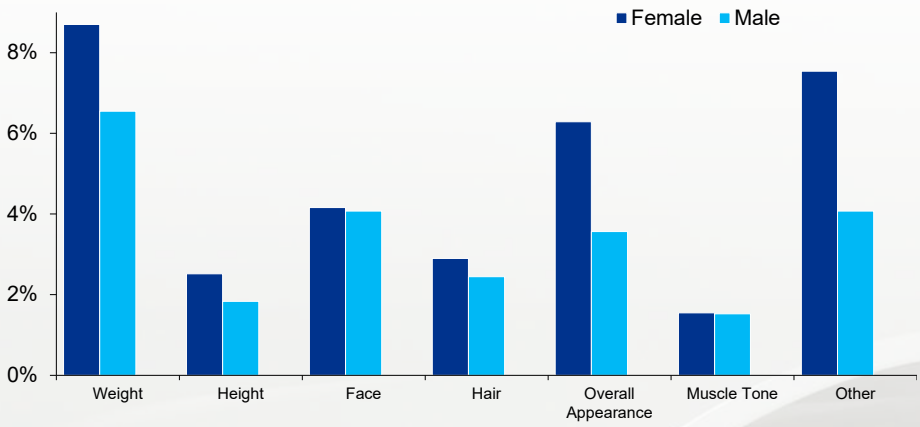
While females reported experiencing highest discrimination based on their weight (8.7%) and 'Other' (7.5%) (which includes bias based on upper and lower torso appearance), males reported experiencing highest discrimination based on their weight (6.6%) and face (4.1%).

When considering appearance-based discrimination between genders, as shown in Figure E.4, there is differences between genders regarding the physical feature considered to be the basis for discrimination. While females reported experiencing highest discrimination based on their weight (8.7%) and 'Other' (7.5%) (which includes bias based on upper and lower torso appearance), males reported experiencing highest discrimination based on their weight (6.6%) and face (4.1%).

The Appearance Ideals survey reported that individuals from non-English speaking households reported higher rates of appearance-based discrimination compared to the general population. Across all groups, weight emerged as the most common basis for appearance-based discrimination, affecting 7.5% of individuals from non-English-speaking households and 6.5% of the general population (See Appendix B, Figure B.8)

In addition, individuals actively participating in training, education, or the workforce report higher rates of appearance-based discrimination compared to their non-engaged peers (See Appendix B, Table B.3).

Figure E.4. Prevalence of appearance-based discrimination in Australia, by feature and gender, 18 years and older



Source: KPMG analysis

Executive summary

There is considerable published evidence on the impacts associated with body dissatisfaction and different forms of appearance-based discrimination. These impacts can be broadly categorised into the following areas:

- Mental health and wellbeing impacts, including increased risk of developing eating disorders, anxiety, depression, suicidality, self harm and lower self-esteem[19, 20,21];
- Physical health risk factors, including those associated with unhealthy eating and low levels of physical activity, health care avoidance, cardiovascular and metabolic issues and substance abuse[22, 23, 24, 25, 26];
- Social inclusion, such as social isolation, bullying, harassment and exclusion, reduced participation in community, school and workplace events, limited opportunities for meaningful relationships and fewer promotions and hiring bias[27, 28, 29, 30,31]; and
- Quality of life, including reduced overall life satisfaction, fewer opportunities for personal and professional growth, and negative effects on career progression and financial stability[32, 33,34].

These impacts result in both social and economic costs. Due to data limitations, it was not possible to estimate the cost of appearance-based discrimination generally, with sufficient research only being available for weight-based discrimination.

To assess the economic and social impact of body dissatisfaction and weight-based discrimination, the following types costs have been estimated:

Economic costs:

Health system costs: represent costs attributable to the health care system. These costs account for increased health care utilisation caused by poorer health outcomes and include costs for medical services and pharmaceuticals.

Productivity costs: account for the loss of productive capacity due to illness or mortality. This category also includes costs associated with absenteeism and presenteeism.

Efficiency costs: account for reduced efficiency resulting from the loss of tax revenue and the need to levy additional taxation to fund service provision.

Loss of well-being: represents the loss of well-being, reflecting the decline in quality of life due to impaired functioning or death resulting from conditions associated with body dissatisfaction and weight-based discrimination.

Executive summary

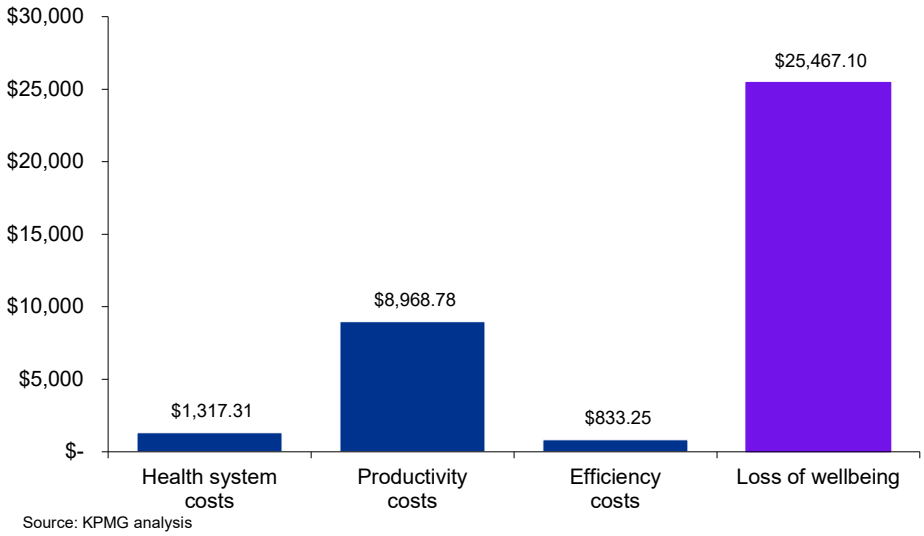
The cost of body dissatisfaction was estimated to be $36.6 billion in Australia in 2023.

Financial costs account for $11.1 billion with an additional $25.5 billion in non-financial costs, reflecting the loss in wellbeing associated with body dissatisfaction. Noting the greater prevalence of body dissatisfaction, females accounted for 71.9%, or $26.3 billion, of total costs. It is estimated that each person with body dissatisfaction aged over 15 years costs the Australian economy $2,685 per year. Reduced productivity, through presenteeism, absenteeism, premature mortality, informal care and reduced employment opportunities, accounts for over 80.7% or $9.0 billion of financial costs.

The economic and social cost of weight-based discrimination was estimated to be $27.6 billion in Australia in 2023.

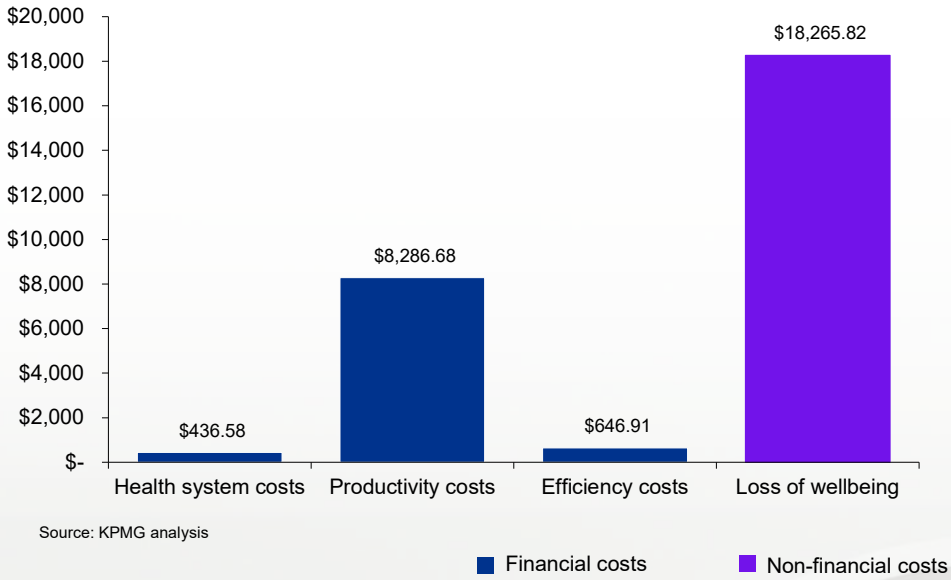
Consistent with the costs associated with body dissatisfaction, financial costs account for $9.4 billion of the total cost, while non-financial costs reflecting the loss in wellbeing made up the majority of cost at $18.3 billion. Females accounted for 66.6%, or $18.4 billion, of total costs, and it is estimated that each person who has experienced weight-based discrimination aged over 15 years, costs the Australian economy $6,593 per year. Similarly to body dissatisfaction, reduced productivity, through presenteeism, absenteeism, premature mortality, informal care and reduced employment opportunities, accounts for over 88.4% or $8.3 billion of financial costs.

Figure 6.1 Costs of body dissatisfaction by cost type in 2023 ($, millions)



Source: KPMG analysis

Figure 6.2 Costs of weight-based discrimination by cost type in 2023 ($, millions)



Source: KPMG analysis

Executive summary

As described, body dissatisfaction and weight-based discrimination impose considerable social, economic, and health costs on individuals and society. These issues are linked to adverse health outcomes, diminished social inclusion, and economic burdens, including healthcare expenses, lost productivity, and restricted labour market opportunities. Addressing these challenges should involve collaboration across multiple sectors, including government, communities, workplaces, and media industries.

Governments, at both state and federal levels, should lead by aligning actions with national strategies such as the National Eating Disorders Strategy 2023-2033[35], the National Mental Health and Suicide Prevention Plan[36] and the National Preventive Health Strategy[37]. Legislative measures, including stronger anti-discrimination laws, can establish a foundation for equitable treatment and inclusion. Public health campaigns should promote diverse body representations, while schools, workplaces, and community services must foster body confidence and challenge weight-based biases. Media, social media and advertising industries also hold a responsibility to avoid perpetuating narrow health and body size standards.

Addressing these issues will have far-reaching benefits. Preventive initiatives can alleviate the strain on healthcare systems, boost workplace productivity, and promote societal wellbeing. Beyond economic gains, tackling body dissatisfaction and appearance-based discrimination can advance equity by reducing disparities and fostering greater inclusion. Prioritising this issue is essential for building healthier, more equitable communities across Australia.

02 Introduction

Body dissatisfaction and weight-based discrimination are key contributors to the development of eating disorders and increase the risk of other mental health conditions such as depression, anxiety, and self-harm.[1] Additionally, these factors negatively affect physical health, lead to social withdrawal, and contribute to healthcare avoidance, which have devastating impacts on a person's overall quality of life [38].

When considered together, these factors also have substantial economic consequences, particularly in terms of healthcare costs and reduced workforce participation and productivity.

Despite the significant impact of these issues, there is limited Australian-based research quantifying the associated costs. This report aims to fill that gap by estimating the annual economic and social cost of body dissatisfaction and weight-based discrimination to the Australian economy. Before presenting the economic analysis, this report first provides an overview of the definitions of 'body dissatisfaction' and 'weight-based discrimination', as well as the underlying societal drivers that contribute to their prevalence.

This report then provides an overview of the analytical approach, before providing estimates of prevalence and the associated health and social impacts. Building on the prevalence and associated impacts, the costs are then presented.

The cost estimates presented within this report have been informed by several sources, including a review of existing literature, a survey of the Australian population* (the Appearance Ideals Survey), as well as input from individuals with lived experience and academic experts and clinicians working in the eating disorder field.

Lived experience, academic and clinical input has been provided via the Lived Experience Advisory Group (LEAG) and Expert Advisory Panel (EAP) convened for the purposes of this project. We extend our sincerest thanks to the members of these groups for their rich insights and guidance.

*The Appearance Ideals Survey was distributed via Butterfly Foundation channels (mailing lists and social media), along with being distributed by a third-party provider – Pureprofile – that administered the survey to a sample of the Australian population stratified and matched to Australian Bureau of Statistics (ABS) 2021 census data. Butterfly channels distributed the survey to individuals aged 16 years and over, while the third-party provider distributed the survey to individuals aged 18 years and over. Only survey data collected by the third-party provider has been used to inform the quantitative aspects of this report (alongside other publicly available information), while data collected by Butterfly Foundation has been drawn upon to inform qualitative aspects.

Introduction

Limitations of the analysis

The quantitative aspects of this report have taken a relatively narrow view of the impacts associated with body dissatisfaction and weight-based discrimination, reflecting limitations in the data and information available for the purposes of cost estimation. Beyond the economic costs, it is acknowledged that, in reality, body dissatisfaction and weight-based discrimination have wide-ranging and diverse impacts for individuals[1]. While wellbeing costs seek to account for these impacts, it is acknowledged that individual impacts vary based on personal circumstances, as well as across different ethnic and social groups within Australia. This includes the unique experiences of First Nations peoples, people across cultural and ethnic groups, the LGBTQIA+ community, and individuals with disabilities, including those with invisible disabilities.[3] While we have not considered this nuance in a quantitative sense (due to data limitations), we have sought to acknowledge it qualitatively. Additionally, noting that no sensitivity analysis was conducted, key elements of the results that may be sensitive to changes include prevalence estimates, and the underlying risk of developing conditions such as anxiety, depression, and eating disorders. See page 23 for further modelling limitations.

Report structure

01 Chapter 1 – Executive summary: presents key analysis findings.

02 Chapter 2 – Introduction (this section): provides an overview of the project background, purpose and limitations.

03 Chapter 3 – Approach: details the project approach, cost framework, data sources and collection methods.

04 Chapter 4 – Prevalence: presents estimates of body dissatisfaction and weight-based discrimination within Australia for people aged 15 years and over.* Prevalence estimates for appearance-based discrimination more broadly are also presented.

05 Chapter 5 – Impacts: presents the impacts associated with body dissatisfaction and weight-based discrimination. Similar to prevalence, the impacts chapter also talks to appearance-based discrimination more broadly.

06 Chapter 6 – Costs: presents the economic and social cost of body dissatisfaction and weight-based discrimination to the Australian economy each year.

07 Chapter 7 – Discussion: highlights considerations for reducing the prevalence of body dissatisfaction and weight-based discrimination, in addition to highlighting gaps within the existing evidence base.

***Throughout this report, weight-based discrimination is discussed within the broader context of appearance-based discrimination, which encompasses other forms of discrimination such as discrimination relating to a person's height, facial features, skin tone, hair or muscle tone. As this report goes on to describe, although the original scope of this work extended to all forms of appearance-based discrimination, there are gaps in available data and literature on different types of appearance-based discrimination beyond weight-based discrimination. Because of this, only weight-based discrimination has been able to be quantified for the purposes of estimating cost.**

*Prevalence estimates draw on existing publicly available estimates of prevalence for individuals aged 15 to 17 years, while the Appearance Ideals Survey is used to estimate prevalence among Australian's aged 18 years and over.

Introduction

Defining body dissatisfaction and weight-based discrimination

Body dissatisfaction refers to the negative thoughts and feelings a person has towards their own physical appearance, while weight-based discrimination, a form of appearance-based discrimination, is the unfair and prejudicial treatment of a person by others based on their body weight.[39]

Body dissatisfaction can affect a person's self-perception and stems from a perceived discrepancy between a person's ideal and actual physical appearance. A national survey by Butterfly Foundation found that more than half of Australian adults rarely speak positively about themselves and 1 in 3 Australian adults are unhappy with the way they look.[40]

53.6%

Of people living in Australia rarely or never speak positively about their appearance

Weight-based discrimination, and appearance-based discrimination more broadly, is the injustice that is both interpersonally and structurally mediated in various settings such as education, employment, and healthcare.

This type of discrimination can manifest in many ways, such as prolonged staring, inquisitive questions, ridicule, and being overlooked. In Australia, appearance-based discrimination can stem from biases related to weight, skin tone, natural hair, body shape, facial differences, cultural dress, or visible tattoos and/or piercings. Australian-based research has found that discrimination, due to body size, shape or appearance, is experienced by 1 out of 5 teenagers.[41]

Many people living in Australia experience multiple forms of discrimination – referred to as intersectional discrimination. Intersectional discrimination can have multiple unique qualitative impacts, including intensifying the discrimination felt by the individual, and increasing the level of disadvantage that they face.

20.0%

Of Australian teenagers experience discrimination due to body shape, size or appearance

Body dissatisfaction and weight-based discrimination are influenced by many factors. This report focuses on appearance ideals - the socially constructed and culturally accepted ideas of beauty and attractiveness.

Appearance ideals can vary across age rages, genders, and/or ethnic groups.

For example, there's a general tendency for women to strive towards thinness and men towards muscularity[42]. In Australia, appearance ideals are typically influenced by Western beauty standards, beach culture, and the emphasis on outdoor lifestyles.

Appearance ideals promote the belief that for individuals to have value, their bodies must look and be a certain weight, shape, and size. These ideals are communicated and promoted in society through various mediums including social media, advertising, film, family attitudes and behaviours, and other sociocultural and media channels[43].

The increasing use of social media has resulted in greater exposure to appearance ideals. In 2022, 82.7% of people living in Australia were active social media users, up from 58.0% in 2015[44] , with an average usage of 2 hours per day. Social media platforms frequently display edited and filtered images of individuals, often altered to achieve an idealised appearance. A study in the United Kingdom found that 90.0% of young women use a filter or edit their photos before posting[45].

Other factors contributing to body dissatisfaction and weight-based discrimination include:

- Health and medical discourse, shaping perceptions of what "healthy" looks like[46], and
- Consumerism and industry pressure.

Our understanding of body dissatisfaction and weight-based discrimination has risen in recent years, underpinned by increasing evidence that shines a light on these issues and their impact.

Evidence spotlight

Bornioli et. al. (2019)

Title: Adolescent body dissatisfaction and disordered eating: Predictors of later risky health behaviours[47]

Outcomes: Demonstrated that body dissatisfaction and disordered eating in adolescence were significant predictors of future risky health behaviours, including higher likelihood of smoking, substance abuse, and risky dieting practices.

Griffiths et al. (2016)

Title: Body dissatisfaction and quality of life: The role of psychological distress and physical health[48]

Outcomes: Found that high levels of body dissatisfaction were linked to poorer quality of life, both mental and physical, and greater psychological distress.

Puhl et al. (2021)

Title: Weight stigma and health-related quality of life in youth[49]

Outcomes: Demonstrated that weight-based discrimination can lead to mental health challenges, such as anxiety and depression, and avoidance behaviours like skipping medical checkups and social activities.

Tackling harmful appearance ideals

Butterfly Foundation has been running awareness campaigns about eating disorders and body image issues within the Australian community for over two decades. Their prevention services team has been working with schools, local councils, sporting bodies and community organisations since 2006 to address factors that influence negative body image, disordered eating and the development of eating disorders. Butterfly Foundation is the Australian delivery partner for the long-running Dove Self-Esteem Project, which aims to boost self-esteem among young people through workshops that challenge appearance ideals.

Appearance-based discrimination and legislative reform

Appearance-based discrimination, involving biases against physical characteristics like weight, height, or facial features, is a growing human rights concern. In the United States, New York City has taken progressive steps by introducing legislation prohibiting weight and height discrimination in employment, housing, and public accommodations[50]. This law, implemented in 2023, acknowledges the systemic disadvantages faced by individuals based on their appearance and sets a precedent for legal protections. In Australia, such protections are limited to Victoria and the Australian Capital Territory, where discrimination based on "physical features" is recognised. Advocates argue for national reform, emphasising the psychological, social, and economic harms of appearance-based biases.

03 Approach

A four-stage approach was taken to estimate the economic and social cost associated with body dissatisfaction and weight-based discrimination to the Australian economy each year: initial research planning activities were first undertaken including the development of a cost framework; data was then collected; cost modelling activities were undertaken; and finally, the approach and results were documented within this report. This process is illustrated below, with further information on each stage provided in the section that follows.

Figure 4.1: Project approach

Research planning

Research planning involved the development of a cost framework from an initial literature scan and identifying data sources and collection methods for the Australian context. This was documented in a research plan, tested, and refined with Butterly Foundation, and input from individuals with lived experience and clinical and research expertise.

Data collection

In line with the research plan, data was then collected. Collection methods included a review of existing literature, and a survey of the Australian population aged 16 years and over (the Appearance Ideals Survey).

Cost modelling

Once the data was collected, cost modelling activities were undertaken to estimate the economic and social cost of body dissatisfaction and weight-based discrimination to the Australian economy each year.

Reporting

A report was then developed documenting the analysis approach and findings (this report).

Source: KPMG

Approach

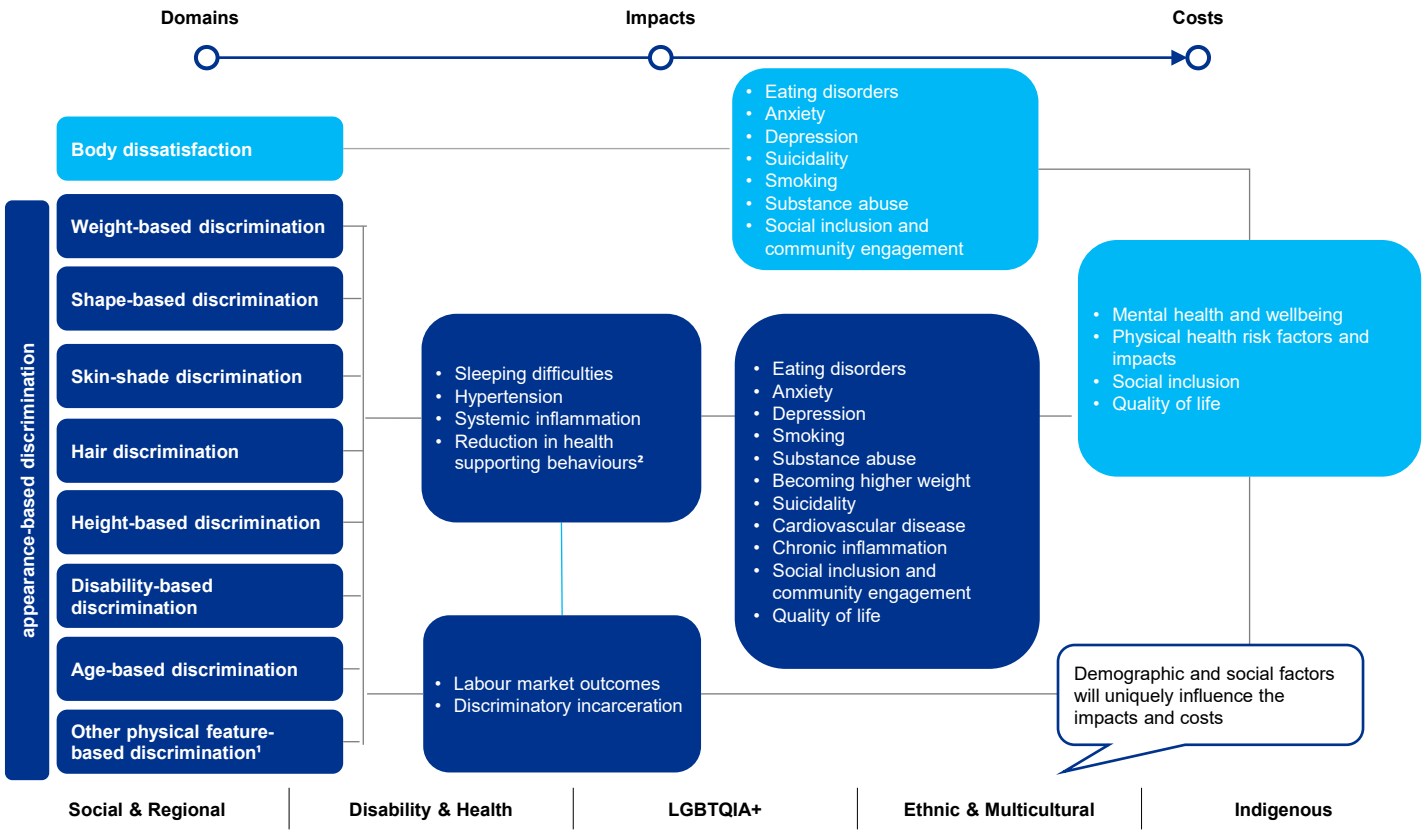
Research planning

As a first step, a scan of existing literature looking at the cost of body dissatisfaction and appearance-based discrimination was undertaken. This work started out by considering all forms of appearance-based discrimination (not just weight-based discrimination), with the intention of costing the issue holistically. The scan identified the 2022 report published by the Dove Self-Esteem Project, prepared by Deloitte in collaboration with an Expert Advisory Panel led by Dr Bryn Austin at the TH Chan Harvard School of Public Health, as being the most aligned to this project's objective. In this report, titled *The Real Cost of Beauty Ideals*[51], the authors estimated the cost of body dissatisfaction and appearance-based discrimination (with a focus on weight discrimination and skin shade discrimination) to the United States' economy each year.

Given the alignment in objective, the cost framework developed by the authors of *The Real Cost of Beauty Ideals* report was taken and adapted to an Australian context for the purposes of this project. This adaptation was informed by a targeted review of Australian-based literature and engagement with individuals with lived experience, research and clinical expertise.

As illustrated below, the cost framework provides a visual depiction of how body dissatisfaction and appearance-based discrimination (broken down into different types of discrimination) results in cost to the Australian economy, by considering the associated impacts. The framework reflects what is reported on within the literature; it is acknowledged that it presents a simplistic view of impacts and costs and does not depict bi-directional or confounding aspects of these issues or tease out difference between vulnerable population groups beyond acknowledging them at a high-level. As previously stated, this nuance has not been captured in a quantitative sense within the scope of this work, due to limitations in available data and information required for the purposes of estimating cost, however qualitative information is provided where appropriate. Additionally, the intersectional effects of demographic factors, such as cultural and sexual identity, are qualitatively acknowledged within the framework where applicable.

Figure 4.2: Body dissatisfaction and appearance-based discrimination costing framework



Source: KPMG analysis adapted from *The Real Cost of Beauty Ideals* report[1]

Approach

With the cost framework in place, the next step involved identifying how each framework component could be estimated. To do this, a set of research questions were developed. Data sources and collection methods required for answering each of the questions were then identified (Table 3.1).

The cost framework, research questions, data sources and collection methods were all documented within a research plan. This plan was then refined with Butterfly Foundation and individuals with lived experience, research, and clinical expertise, prior to the commencement of the data collection activities.

Data collection

As noted in Table 3.1, key sources of data included the BodyKind Youth Survey, the Longitudinal Study of Australian Children (LSAC), the Appearance Ideals Survey developed for the purposes of this project, grey and published literature, along with unit costs published by Government agencies such as the Australian Institute of Health and Welfare (AIHW) and the ABS.

Further information on each data source and the associated collection method is provided below.

BodyKind Youth Survey

Data collected by the BodyKind Youth Survey conducted by Butterfly Foundation in 2023 has been used to estimate the proportion of people living in Australia aged 15 to 17 years who experience body dissatisfaction.

Longitudinal Study of Australian Children

Data collected by the LSAC (K Cohort, Wave 7, 2016) has been used to estimate the proportion of people living in Australia aged 15 to 17 years who experience appearance-based discrimination.

Appearance Ideals Survey

To address identified gaps within the literature, a survey was developed and distributed, that gathered information on the prevalence of body dissatisfaction and appearance-based discrimination in Australia, along with the associated impacts and costs, in line with the research questions.

The survey was distributed by Pureprofile, an Australian owned market research, data and insights company, to people living in Australia aged 18 years and over. Butterfly Foundation channels were also used, including the organisation's social media, lived experience groups and mailing lists. Unlike Pureprofile, Butterfly Foundation distributed the survey to people living in Australia aged 16 years and over.

Table 3.1: Cost framework components, research questions, data sources and collection methods

Component	Description	Research question	Data sources and collection methods
Domains	The prevalence of body dissatisfaction and appearance-based discrimination within Australia.	What is the prevalence of body dissatisfaction and appearance-based discrimination in Australia?	• Estimates of prevalence, collected by the BodyKind Youth Survey and the LSAC. • Estimates of prevalence, collected by the Appearance Ideals Survey.
Impacts	The impacts associated with body dissatisfaction and appearance- based discrimination.	What health and social impacts are linked to body dissatisfaction and appearance-based discrimination in Australia?	• Grey and published literature, collected via a literature review. • Insights into associated outcomes and impacts, collected by the Appearance Ideals Survey.
		What proportion of the identified impacts can be attributed to body dissatisfaction and appearance-based discrimination?	
Costs	The costs associated with the identified impacts.	What are the costs associated with the impacts attributed to body dissatisfaction and appearance-based discrimination in Australia each year?	• Grey and published literature, collected via a literature review. • Insights into associated impacts, collected by the Appearance Ideals Survey. • Cost data published by Government agencies

Source: KPMG

Approach

Appearance Ideals Survey cont.

As previously noted, only survey data collected by Pureprofile was used to inform the quantitative aspects of this report, as this channel used demographic quotas (age, gender, income) and geographic location so that the final sample mirrored the Australian national profile. A sample size of 2,016 individuals aged 18 years and over was collected by the third-party, representing a national sample providing a 95% confidence level and a margin of error of 5%.

An additional 455 responses were collected via Butterfly Foundation channels. These channels provide access to individuals with firsthand knowledge of the issues related to body dissatisfaction, appearance-based discrimination, along with other linked conditions such as eating disorders. These responses therefore provided deeper insight into the challenges faced by individuals navigating body dissatisfaction and appearance-based discrimination more broadly, that have been used to inform this report from a qualitative standpoint.

The Bellberry Human Research Ethics Committee reviewed and approved this study (reference number: 2024-08-1150) in accordance with the National Statement on Ethical Conduct in Human Research (2023).

Literature review

A quasi-systematic literature review was conducted to identify published studies on body dissatisfaction and appearance-based discrimination, in terms of the associated impacts and costs.

The review included searches across various databases, including ProQuest, EBSCO, PubMed, PsycINFO (Ovid), Google Scholar, and EconLit. This process was supplemented with targeted searches using existing search engines and snowballing techniques.

The review involved a structured, hierarchical approach to study selection, considering factors such as study quality, generalisability, and internal consistency.

Two reviewers independently screened over 15,000 studies, followed by an assessment of eligibility. Following screening and assessment, 66 studies were identified as relevant and reviewed in greater detail.

Government agency data

Data published by Australian Government agencies relating to cost was also collected.

This includes:

- Health system unit costs published by the AIHW;
- Prevalence of health conditions and risk factors published by the ABS;
- Inflationary data published by the ABS;
- Population demographics, wages and employment status published by the ABS; and
- Value of a statistical life, as reported by the Office of Impact Analysis.

Approach

Following data collection, data gaps were identified where not all components of the cost framework could be reliably estimated. This is considered to be a key limitation of this analysis, and suggests that, if all components could be quantified the estimates of cost would be considerably higher.

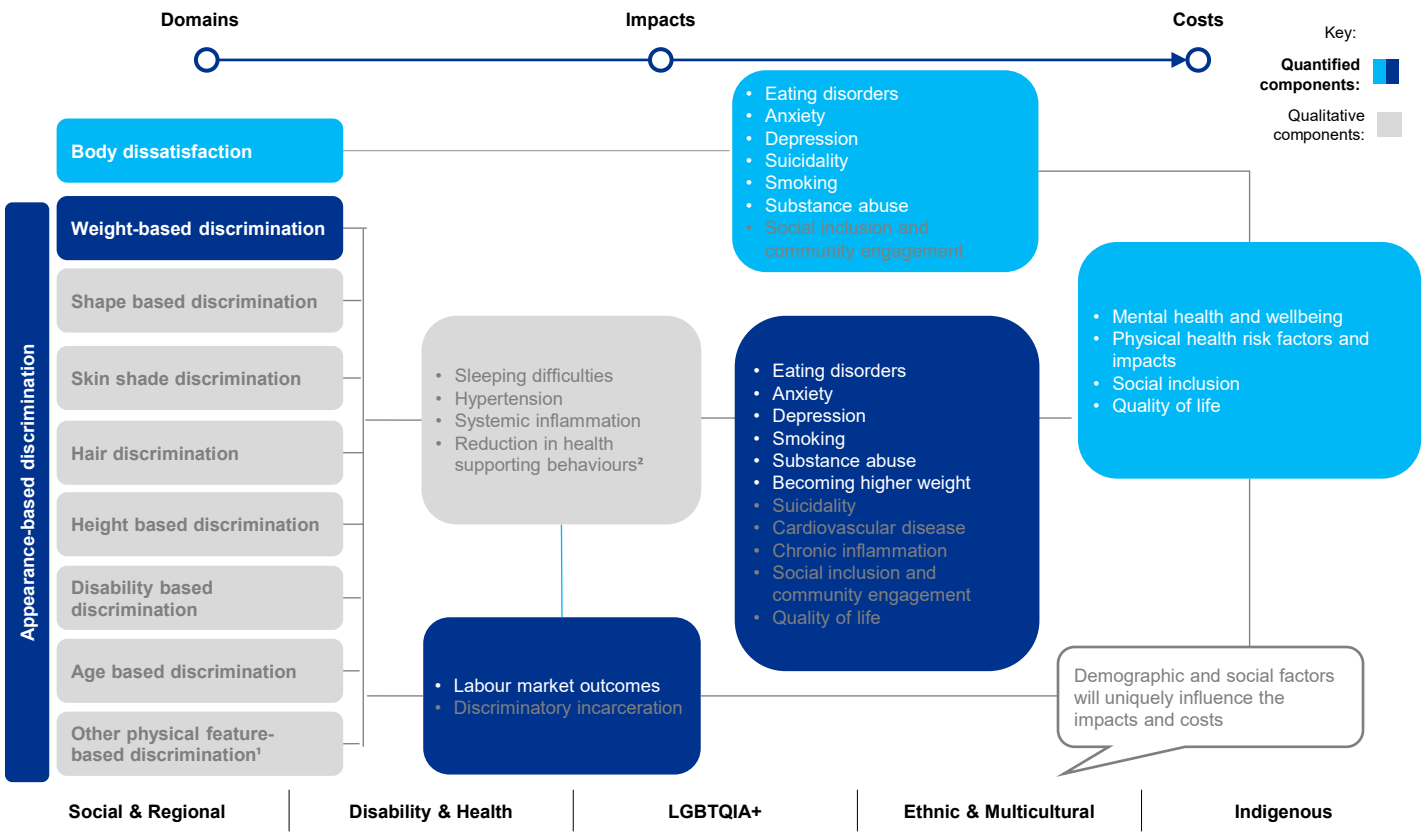
The cost framework presented on page 19 has been represented below, this time highlighting the components able to be quantified (in colour) in addition to those components unable to be quantified (in grey). As previously noted, although prevalence estimates of appearance-based discrimination have been estimated, only weight-based discrimination has been used to inform the estimates of cost.

This is due to the available literature in the Australian context primarily focusing on weight-based discrimination, with limited or no research addressing other types of appearance-based discrimination.

Cost modelling

Collected data was brought together in Microsoft Excel, and modelling was then undertaken to generate cost estimates.

Figure 4.3: Focused quantitative framework for estimating the cost of body dissatisfaction and appearance-based discrimination



Source: KPMG analysis adapted from The Real Cost of Beauty Ideals report2

Approach

Cost modelling cont.

There are several limitations associated with the cost modelling, including:

- The ability to establish causal relationships between body dissatisfaction and appearance-based discrimination and the associated impacts. This limitation stems from much of the existing research being cross-sectional, limiting the ability to draw definitive conclusions about causality. The lack of longitudinal studies further complicates efforts to capture the dynamic nature of these relationships over time;
- There are significant gaps in the existing literature regarding the impacts of body dissatisfaction and appearance-based discrimination, particularly concerning marginalised groups. For instance, while substantial evidence links body dissatisfaction to mental health issues among women, similar research for men and non-binary individuals is lacking. Future studies should focus on intersectional approaches to better understand the nuances of discrimination across different racial, ethnic, and gender identities, ultimately providing a more comprehensive view of the economic implications;
- Many of the impacts considered are comorbid, meaning more than one impact may be affecting an individual concurrently. To minimise this estimates have been drawn from research which controls for comorbid conditions where possible;
- There are notable gaps in understanding the various forms of appearance-based discrimination, as the evidence in Australia primarily highlights weight-based discrimination as the most significant. It is important to acknowledge that this does not encompass the full range of discrimination that individuals may experience based on their appearance; and
- The healthcare system in Australia is under considerable strain, characterised by long wait times for mental health treatment. In 2023, many individuals may not have been unable to access necessary care, due to cost of living pressure and/or enduring consequences of COVID-19, leading to an underrepresentation of the true cost burden. Additionally, alternative therapies, private treatments, and informal support services often remain untracked in official statistics, further contributing to the potential underestimation of associated costs.

Reporting

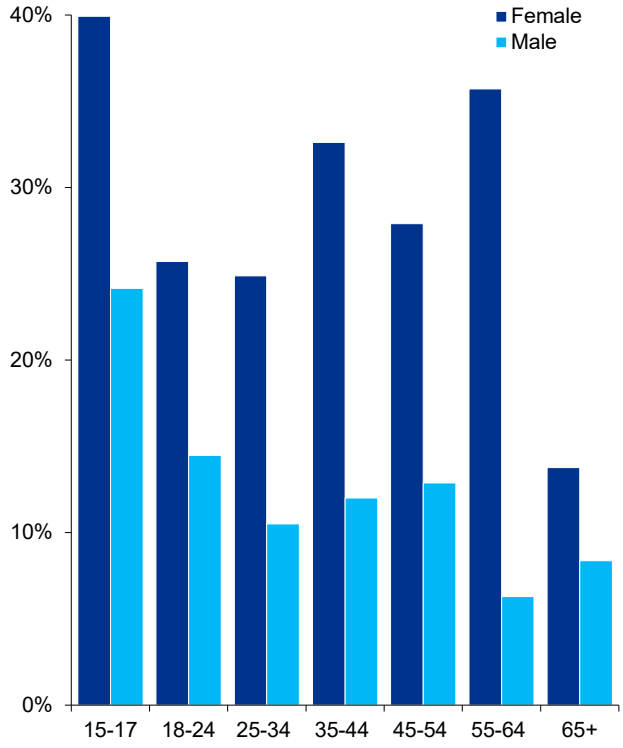
A report was then developed documenting the analysis approach and findings, including lived experiences (this report).

04 Prevalence

4.1m Body dissatisfaction

people living in Australia aged 15 years and over reported body dissatisfaction.
This represents **18.9%** of the total Australian population aged over 15.

Figure 4.1. Prevalence of body dissatisfaction in Australia, by age and gender, 15 years and older

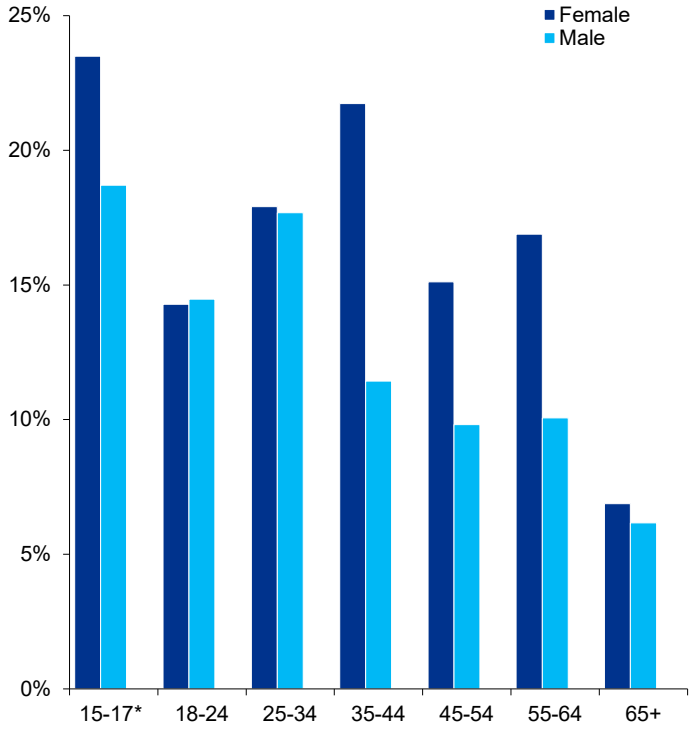


Source: KPMG analysis

3.1m Appearance-based discrimination

people living in Australia aged 15 years and over have experienced appearance-based discrimination in the previous 12 months.
This represents **13.8%** of the total Australian population aged over 15.

Figure 4.2. Prevalence of appearance-based discrimination, by age and gender, 15 years and older



Source: KPMG analysis

**The data for 15-17-year-olds is based on 14-15-year-old estimates and has been evaluated and used after comparison with other estimates.*

Prevalence
Body dissatisfaction

It is estimated that over 4.1 million people or 18.9% of the population aged 15 years and over are significantly affected by body dissatisfaction.

To estimate this:

- BodyKind Youth Survey data from 2023 was used to estimate prevalence for individuals aged 15 to 17 years; and
- The Appearance Ideals Survey was used to estimate prevalence for individuals aged 18 years and over.

Combined estimates of prevalence were then brought together and multiplied by 2023 estimates of the Australian population.

Both surveys include a question assessing participants' level of body dissatisfaction.

The BKYS survey uses a 7-point Likert scale, asking: “How satisfied (e.g., happy, confident, comfortable) are you with how your body looks?” Responses of “mostly dissatisfied” or “completely dissatisfied” were used to calculate prevalence.

The Appearance Ideals Survey uses a 5-point Likert scale, asking: “How satisfied have you been with your overall appearance in the past 12 months?” Responses of “mostly dissatisfied” or “very dissatisfied” were used as indicators of body dissatisfaction.

It is acknowledged that this approach likely underestimates the prevalence of milder body dissatisfaction as it only includes extreme responses.

Additionally, differences in scale granularity and self-reporting bias may further contribute to underestimation. However, this method was chosen as the impacts costed are linked to those experiencing more severe body dissatisfaction. A similar approach is used by several studies including Carter et al. (2017)[52], who measured body dissatisfaction with a 5-point Likert scale, focusing on extreme responses and acknowledging underestimation of milder dissatisfaction.

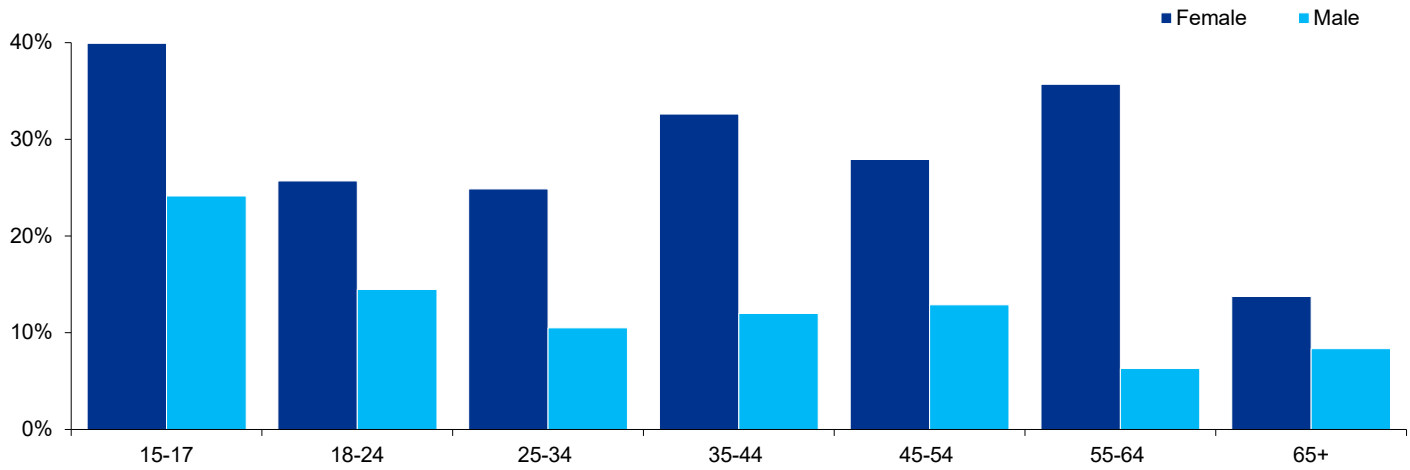
The findings indicate variability in body dissatisfaction across age groups and genders.

As shown in Figure 4.1, females experience higher levels of body dissatisfaction compared to males across all age groups, with dissatisfaction being highest among teenagers and in late middle life, peaking at 39.9% in the 15 to 17 age group and again 35.7% in the 55 to 64 age group.

Adolescent girls experience high levels of body dissatisfaction for several reasons including, physical changes during puberty, societal pressures to be thin or muscular, and peer comparisons[53]. Exposure to unrealistic body images on social media and teasing further exacerbate these feelings[54].

Body dissatisfaction is notably lower among women in the 18 to 34 age group, possibly reflecting shifting priorities and changing societal expectations as women age. However, prevalence increases again for middle aged women, reaching 32.6% among women in the 35 to 44 age group.* Higher rates of body dissatisfaction among middle aged women is aligned with other studies, including McLaren et al. (2004)[55] and Khalil et al. (2022).[56]

Figure 4.1. Prevalence of body dissatisfaction in Australia, by age and gender, 15 years and older



Source: KPMG analysis

*Please note - data indicates a lower prevalence of body dissatisfaction at certain ages, rather than a longitudinal decrease or increase in individual levels of dissatisfaction.

Prevalence
Body dissatisfaction

As described by Samuels et al. (2019)[57], factors known to drive body dissatisfaction among females in midlife include:

- Stress and anxiety in relation to the physiological changes of ageing, which can contribute to feelings of loss of control in the context of a culture that valorises youthfulness; and
- The lack of older women role models amidst ageist social norms which frame ageing as something to defy and combat with diet, exercise and medication regimes.

'There's a sense of 'loss' that comes with losing the attributes of youth. [For] years, I [have had] to work hard to stay positive as my body changes, especially since I struggled with body image dissatisfaction when I was younger.'

Body dissatisfaction in males follows a similar pattern to females but at lower levels. The highest prevalence is observed in the 15 to 17 age group (24.2%), after which rates decline in the 18 to 34 group. There is a slight increase in dissatisfaction after age 34, with peaks in the 35 to 44 and 45 to 54 age groups, followed by a decline in the 55 to 64 group (6.3%) and a slight rise to 8.4% in those aged 65 and older. This suggests that males may also experience rising dissatisfaction as they age, particularly as they face pressures related to physical fitness, muscle mass loss, and weight gain, which may intensify after age 54[58].

As described, overall, although females report higher levels of body dissatisfaction compared to males, body dissatisfaction is most common for both genders during the teenage years, and tends to peak again in middle and late middle age. This shift may be influenced by changing societal expectations and growing concerns about aging, often reinforced by media portrayals of unattainable body ideals[59].

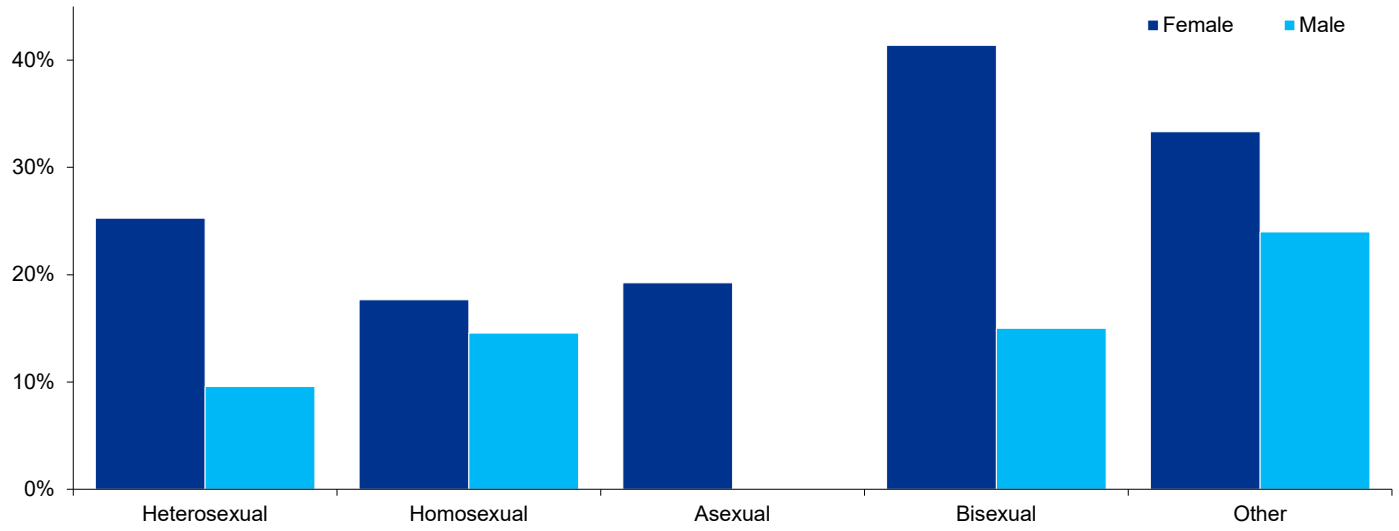
While not the focus of this report, it is important to highlight that early body dissatisfaction, which can start in childhood or early adolescence, is a growing concern. A study by Damiano et al. (2015)[60] found that children as young as 5 can develop awareness of societal beauty ideals.

Additionally, the BKYS showed high levels of body dissatisfaction among 12- to 14-year-olds, with 40.8% of females and 15.4% of males reporting dissatisfaction.

Among individuals experiencing body dissatisfaction, the Appearance Ideals survey highlighted that 72.5% aspired to have a more muscular physique (see Appendix B, Figure B.4), while 88.9% expressed a desire to be thinner or leaner (see Appendix B, Figure B.5).

Additionally, the Appearance Ideals Survey found that body dissatisfaction is particularly prevalent among bisexual individuals within the LGBTQIA+ community. It was also common for individuals identifying as 'Other' which includes those who identify as pansexual and queer (Figure 4.2).*

Figure 4.2. Prevalence of body dissatisfaction in Australia, by gender and sexual orientation, 18 years and older



Source: KPMG analysis

*Although the survey responses included the LGBTQIA+ community, we have grouped responses with limited representation to ensure more meaningful analysis.

Prevalence
Body dissatisfaction

Higher rates of body dissatisfaction in the LGBTQIA+ community is consistent with other research, including He et al. (2020)[61], who reports that LGBTQIA+ identifying males experience higher levels of body dissatisfaction than their heterosexual counterparts, as they often feel the need to meet both LGBTQIA+ and heterosexual beauty standards.

When compared to other demographic groups in the Appearance Ideals Survey, such as individuals born with a sex variation or from non-English-speaking households, LGBTQIA+ females reported the highest prevalence of body dissatisfaction across all measures (see Appendix B, Figure B.3).

This project lacked ethical approval to explore body dissatisfaction in ethnic minorities, but research shows significant body image concerns among groups including Indigenous people.

Studies show that Indigenous adolescents and adults experience body dissatisfaction at rates comparable to or higher than non-Indigenous people, particularly in the context of weight-related concerns and body image pressures.

McCabe et al. (2005)[62] explored body dissatisfaction among Aboriginal and Torres Strait Islander adolescents, revealing that boys reported higher levels of body dissatisfaction and a greater desire to build muscle, while girls showed similar or lower levels of body dissatisfaction compared to their non-Indigenous counterparts.

These findings suggest that body dissatisfaction may manifest differently across genders within Indigenous populations but remains a significant concern overall.

Previous research by Butterfly Foundation from the BKYS survey 2023 has showed that high levels of concern around body image were similar between young Aboriginal and/or Torres Strait Islander respondents and young non-Indigenous respondents (44.5% and 46.4 respectively).

*Although the survey responses included the LGBTQIA+ community, we have grouped responses with limited representation to ensure more meaningful analysis..

Prevalence
Appearance-based discrimination

It is estimated that over 3.1 million people or 13.8% of the Australian population aged 15 years and over have experienced appearance-based discrimination in the previous 12 months.

Estimates of appearance-based discrimination are based on two sources:

- LSAC data, which asked people living in Australia aged 14 to 15, “In the last six months, have you been treated unfairly or badly because of your body size, shape, or physical appearance?”; and
- The Appearance Ideals Survey, which asked respondents aged 18 and older, “Have you experienced any form of discrimination based on your appearance in the past 12 months?”.

Respondents who answered ‘yes’ were then brought together and multiplied by 2023 estimates of the Australian population.

As shown in Figure 4.3, the proportion of people living in Australia aged 15 to 17 reporting appearance-based discrimination is higher than most other cohorts. This may be due to differences in the way appearance-based discrimination has been measured for this group, asking respondents if they have experienced this type of discrimination in the previous six months (whereas the Appearance Ideals Survey asks in the previous 12 months). Further, it is acknowledged that the estimate of prevalence reflects data on 14 and 15 year olds. It has been assumed this prevalence also applies to 16 and 17 year olds, with consideration of other estimates reporting consistency across teenage years (14 to 17 years)[63].

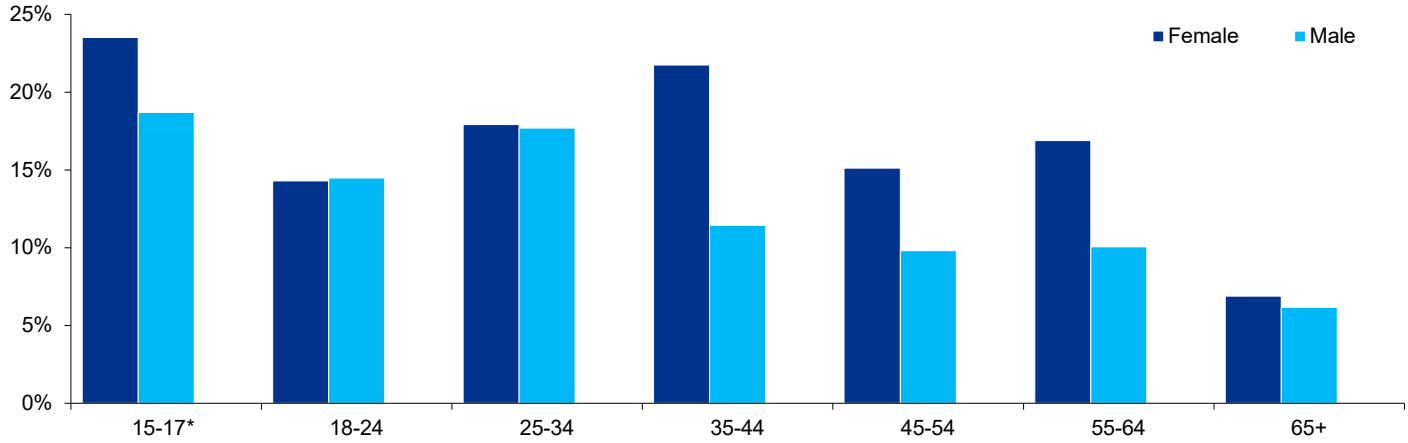
The high level of prevalence among this age is also reflected in other data collections examining young people's experience of appearance-based discrimination. This includes survey data published by the BKYS, which found that approximately 36.0% of young people, aged 12 to 17 years answered yes to “Have you ever received negative comments or been teased about your appearance?”.

The higher rate of appearance-based discrimination in people living in Australia in the 15 to 17 age group compared to those in the 18 to 24 age group may also be due to this age group spending most of their time in a school environment, where other problematic behaviours such as bullying are seen at high rates. A study by the Anti-Bullying Alliance highlights that appearance-targeted bullying is prevalent among school-aged children, often intersecting with other forms of discrimination[64].

For females, experiences of appearance-based discrimination fluctuates between age groups, peaking in the teenage years, in respondents in the 35 to 44 age group, and again for the 55 to 64 age group. For males, appearance-based discrimination is highest in teenagers (consistent with females), in the 25 to 34 age group, and is lower in older age groups.

When comparing appearance-based discrimination between genders, females in the 15 to 17 age group and those within the 35 to 64 age range reported notably higher rates compared to men. Rates were comparable across other age groups

Figure 4.3. Prevalence of appearance-based discrimination, by age and gender, 15 years and older



Source: KPMG analysis

Note: While the Appearance Ideals Survey was open to those aged 16 years and over via the Butterfly Foundation channels, this was utilised for qualitative analysis only. Quantitative analysis was conducted on panel data (18+) to inform prevalence estimates.

**The data for 15-17-year-olds is based on 14-15-year-old estimates and has been evaluated and used after comparison with other estimates.*

Prevalence
Appearance-based discrimination

Experiences of appearance-based discrimination are more common in certain population groups. As reported within the LSAC data, teenagers' experiences of appearance-based discrimination are particularly high among higher weight teens (43.0%), same-sex attracted teens (558%) and Indigenous teens (40.4%).[65]

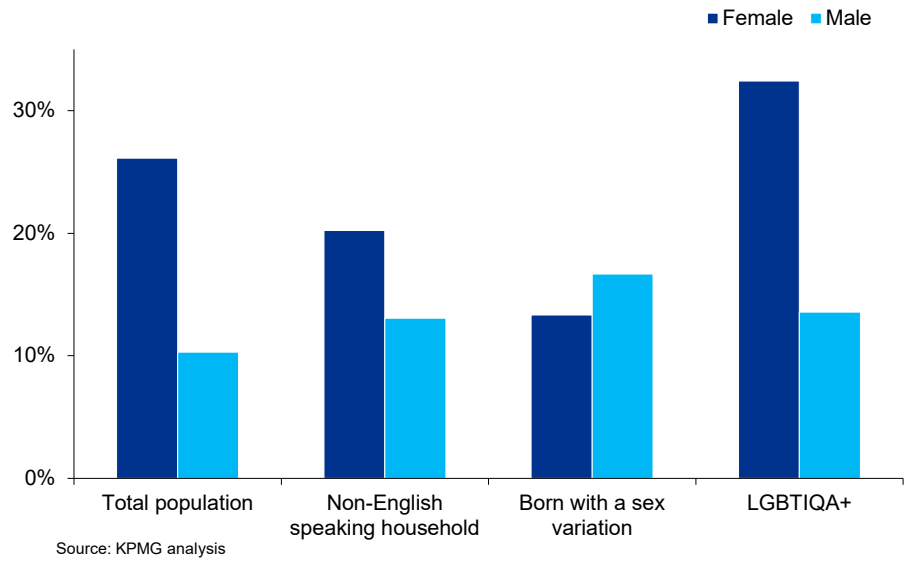
When considering data collected by the Appearance Ideals Survey, people born with a sex variation, who identify as LGBTQIA+ and those who speak languages other than English in Australia face higher reported levels of appearance-based discrimination, as shown in Figure 4.4 when compared to the total sample.

Research from La Trobe University's Australian Research Centre in Sex, Health and Society (ARCSH) (2019)[66] shows that LGBTQIA+ individuals, especially gender non-conforming people, experience higher rates of discrimination linked to their appearance. Further research by the Diversity Council Australia (2020)[67] highlights that people from culturally and linguistically diverse backgrounds, particularly those who do not conform to mainstream appearance ideals, are more likely to experience discrimination in both social and professional settings.

The Appearance Ideals Survey also revealed that among respondents who experienced appearance-based discrimination in the past 12 months, notable gender differences emerged regarding the physical feature noted as the basis for discrimination (Figure 4.5).

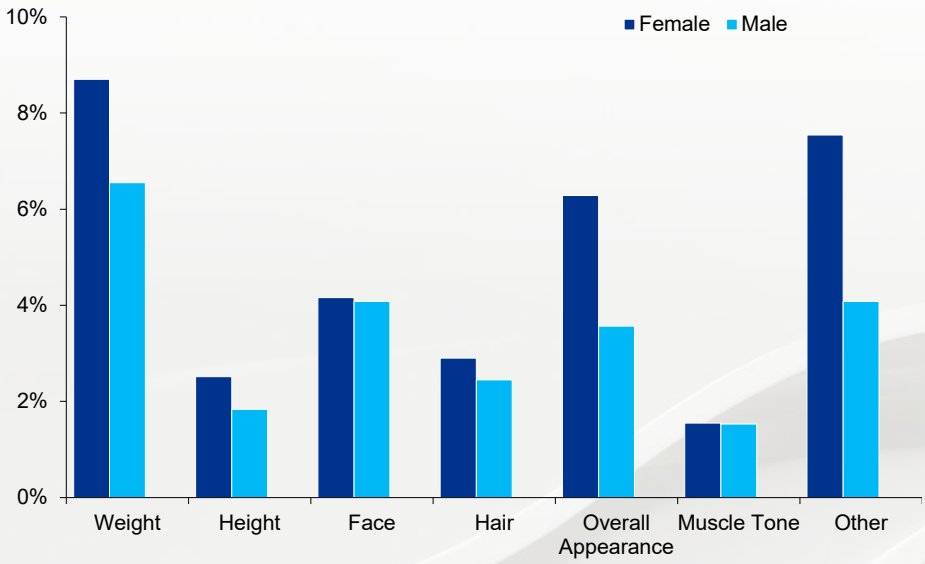
"Being gay, physical appearance is very important, so you are ignored if your body is not a good one"

Figure 4.4. Prevalence of appearance-based discrimination in Australia, by group and gender, 18 years and older*



Source: KPMG analysis

Figure 4.5 Prevalence of appearance-based discrimination in Australia, by feature and gender, 18 years and older



Source: KPMG analysis

Prevalence
Appearance-based discrimination

For females surveyed, around 9.0% indicated that they experienced discrimination due to their weight, while 7.5% indicated 'Other'. For males, around 6.5% indicated the discrimination they experienced was due to their weight, while 4.0% experienced discrimination based on their face.

Interestingly, muscle tone-based discrimination was equally common for females and males, affecting 1.5% of both genders. Overall appearance-based discrimination showed a higher prevalence among females (15.3%) compared to males (11.1%).

Within the 'Other' category of appearance-based discrimination, females again report greater impact, at 7.5% compared to 4.0% for males. For those who answered 'Other', written responses indicate that a number of respondents faced discrimination due to age. This included biases against both younger individuals perceived as "looking too young" in the workplace and older individuals facing age-related stereotypes.

These findings underscore the differing ways societal standards and biases related to appearance affect individuals based on gender. While both genders are likely to experience weight related discrimination, females are more likely to experience discrimination tied to their overall appearance, whereas males are more affected by biases related to facial features.

Similarly, age-related biases reflect additional layers of discrimination, highlighting how appearance-based judgments extend beyond gender and weight to encompass age perceptions in the workplace and society.

The Appearance Ideals survey reported that individuals from non-English speaking households reported higher rates of appearance-based discrimination compared to the general population. Across all groups, weight emerged as the most common basis for appearance-based discrimination, affecting 7.5% of individuals from non-English-speaking households and 6.5% of the general population (See Appendix B, Figure B.8)

In addition, individuals actively participating in training, education, or the workforce reported higher rates of appearance-based discrimination compared to their non-engaged peers (See Appendix B, Table B.3).

05 Impacts

Mental health and wellbeing

- Eating disorders
- Anxiety
- Depression
- Suicidality
- Self-harm
- Lower self-esteem

Physical health risk factors

- Unhealthy eating and low levels of physical activity
- Avoidance of health care
- Cardiovascular and metabolic issues
- Substance abuse

Social inclusion

- Social isolation
- Bullying, harassment or exclusion
- Reduced participation in community, school or workplace events
- Limited opportunities for meaningful relationships
- Fewer promotions and hiring bias

Quality of life

- Lower overall life satisfaction
- Reduced opportunities for personal and professional growth
- Negative impacts on financial stability including reduced earnings due to workplace discrimination, lower educational participation, and health-related effects.

There is considerable published evidence on the impacts associated with body dissatisfaction and different forms of appearance-based discrimination. These impacts can be broadly categorised into the following areas:

- Mental health and wellbeing;
- Physical health risk factors;
- Social inclusion; and
- Quality of life.

More detail on each impact is provided below.

Mental health impacts

Eating disorders

Body dissatisfaction and appearance-based discrimination are key contributors to the development of eating disorders. A strong association exists between body dissatisfaction and behaviours such as restrictive dieting, which increase the risk of developing eating disorders[68]. According to Stice et al. (2017)[69], women who experience body dissatisfaction are significantly more likely to be diagnosed with an eating disorder.

Additionally, Neumark-Sztainer et al. (2006)[70] found that even when controlling for BMI*, body dissatisfaction predicts unhealthy weight control behaviours and binge eating in both females and males. Furthermore, individuals who experience weight-based discrimination, specifically people living in larger bodies, are up to 33.0% more likely to engage in binge eating behaviours[71].

Eating disorders have the highest mortality rate compared to other mental health conditions, with over 1,200 deaths attributed to eating disorders in 2023. The prevalence of these disorders has been steadily increasing over the past decade, rising by 21.0%[72]. It is estimated that 10.5% of people will be diagnosed with an eating disorder in their lifetime, with an economic and social cost of $67 billion annually, or $60,700 per affected individual.

"My eating disorder behaviours leave me with limited energy, making it challenging to fully engage in activities as I'd like. For example, I can only manage part-time work." **

**We recognise that BMI is a problematic measure as it can stigmatise weight and oversimplify complex aspects of health and body diversity. Its use in this context is solely due to its citation from the original source.*
***This section includes the voice of lived experience, gathered by the Appearance Ideals Survey (Section 3) and workshops with the LEAG.*

Impacts

Anxiety and depression

Body dissatisfaction is a significant predictor of anxiety and depression. Tiggemann and Slater (2013)[73] found that exposure to idealised media images exacerbates body dissatisfaction and increases depressive symptoms, particularly among young women. Similarly, Bornioli et al. (2020)[74] revealed that men with body dissatisfaction are 2.9 times more likely to experience severe depressive episodes, while women are 1.7 times more likely compared to those without body dissatisfaction.

Fuller-Tyszkiewicz et al. (2019)[75] demonstrated that upward social comparisons—where individuals compare themselves to others they perceive as "better off"—can trigger acute depressive episodes and heightened anxiety. Furthermore, McLean et al. (2022)[76] found that relative to those with no or low body dissatisfaction, adolescents with clinically significant body dissatisfaction were 24 times more likely to also report possible, probable, or major depressive episodes.

Anxiety and body dissatisfaction have a bidirectional relationship: anxiety can increase the risk of body dissatisfaction, while body dissatisfaction can, in turn, exacerbate anxiety. Hatzenbuehler et al. (2009)[77] found that perceived weight discrimination is not only associated with anxiety disorders but also serves as a prominent risk factor for multiple mental health diagnoses and psychiatric comorbidity.

"The constant preoccupation with my body size runs through my mind from the moment I wake up until I go to sleep. The overwhelming feelings of not fitting in or belonging, due to my body and its size, are a major source of stress and anxiety."

Suicidality and self-harm

Both body dissatisfaction and weight-based discrimination are associated with increased rates of suicidal ideation and attempts. Hay et al. (2017)[78] found that individuals with eating disorders—often rooted in body dissatisfaction—experience suicide rates up to 20 times higher than the general population. Similarly, Crow et al. (2008)[79] demonstrated that body dissatisfaction, compounded by extreme weight control behaviours, significantly elevates the risk of suicidal tendencies, particularly in young women. Furthermore, Bornioli et al. (2019)[80] highlighted that body dissatisfaction is a predictor of self-harm, especially among females, underscoring the severe mental health risks linked to these issues.

This risk of suicidality and self-harm as a result of body dissatisfaction and weight-based discrimination is elevated in individuals who identify as LGBTQIA+, with this population group already experiencing higher rates of these issues compared to the general population due to experiences of discrimination and stigma based on their sexuality and/or gender identity.[81]

As reported by Hill et al. (2021)[82], over one-quarter (25.6%) of young people in Australia aged 16 to 17 years who identify as LGBTQIA+, who completed the Writing Themselves in 4 survey, had attempted suicide in their lifetime, almost five times the 5.3% reported among the general population aged 16 to 17.

Lower self-esteem

Body dissatisfaction contributes to lower self-esteem, as individuals who are dissatisfied with their appearance often feel unworthy or inadequate, which can reinforce feelings of dissatisfaction. In a study by Slater and Tiggemann (2010)[83], women in Australia who reported high weight-based dissatisfaction also demonstrated significantly lower self-esteem, which was further exacerbated by appearance-based discrimination.

Although the bi-directional nature of body dissatisfaction and lower self-esteem is acknowledged, there is also evidence demonstrating that body dissatisfaction is a risk factor for lower self-esteem [84, 85].

Impacts

Physical health risk factors

Unhealthy eating and low levels of physical activity

Body dissatisfaction and weight-based discrimination can lead to unhealthy eating behaviours, such as unhealthy weight control behaviours (UWCB), which includes excessive exercise, fasting, vomiting, and/or the use of non-prescription weight loss products.

In Australia, studies have highlighted the concerning prevalence of these practices. The Young Minds Matter Survey (2023) found that approximately 1 in 3 Australian adolescents engaged in some form of unhealthy weight control behaviour (UWCB) in the past year, with 1 in 6 participating in fasting and 1 in 12 engaging in purging behaviours like vomiting. Excessive exercise, defined as exercising 6 or 7 days per week for more than 2 hours per session, was reported by 4.0% of adolescents. Rossi et al. (2022)[86] found that adolescents aiming to reduce their body size were more likely to use laxatives and diuretics. Additionally, a systematic review by Hall et al. (2024)[87] revealed that 1 in 20 adolescents used weight-loss products in the past month, with diet pills being the most commonly used product..

In addition to unhealthy weight control behaviours, body dissatisfaction and weight-based discrimination can lead to other forms of maladaptive eating behaviours.

Puhl and Suh (2015)[88] describe how individuals facing weight-based discrimination often engage in emotional eating, creating a cycle of weight increase and exacerbated stigma. Field et al. (2014)[89] found that adolescent males with concerns about physique were more likely to become an unhealthy weight, demonstrating the long-term consequences of appearance-related anxieties.

Studies have also shown that appearance ideals can lead to avoiding physical activity. A study by Jackson et al (2014)[90] showed that perceived weight discrimination was associated with almost 60.0% higher odds of being inactive. Puhl and Suh (2015)[91] present similar findings, reporting that individuals facing appearance-based discrimination often avoid physical activity due to shame.

The relationship between body dissatisfaction, weight-based discrimination, unhealthy eating and low levels of physical activity is complex. Historically, health care systems and societal norms have propagated the belief that living in a larger body is inherently unhealthy, perpetuating widespread body dissatisfaction and weight-based discrimination. This narrative has contributed to systemic discrimination of individuals living in a larger body, and there is now established evidence that challenges this simplistic association, indicating that being in a larger body does not necessarily equate to poor health.[92]

It is however acknowledged, that for some, living in a larger body may coincide with being at an increased risk of certain conditions, such as cardiovascular disease, and that the weight stigma, discrimination, and the resulting dissatisfaction can exacerbate these risk factors by fostering stress and discouraging health-promoting behaviours, such as good nutrition and exercise.

"Concerns about my appearance have affected my comfort in attending workplace settings. I feel overwhelmed by the need to dress appropriately, pack all my food, and the fear of having to eat out. When traveling for work, I experience anxiety about not knowing what exercise facilities and food options will be available. These concerns around my body and appearance have made it challenging to engage socially, often causing me to miss out on opportunities."

The Appearance Ideals survey revealed that body dissatisfaction and appearance-based discrimination were self-perceived to contribute to various negative outcomes, including weight changes (17%), fatigue or lack of energy (22%), and sleep problems (19%) (See Appendix B, Figure B.9).

Impacts

Health care avoidance

Drury et al (2002)[93] found that living in a larger body* is associated with an increase in delay/avoidance of healthcare due to anticipation of weight stigma from health professionals. Weight-related reasons for delaying/avoiding health care included having "gained weight since last health care visit," not wanting to "get weighed on the provider's scale," and knowing they would be told to "lose weight."

Problematic alcohol and other drug use

Body dissatisfaction is a significant predictor of risky health behaviours, including alcohol and drug use. Bornioli et al. (2019)[94] found that adolescents dissatisfied with their bodies are more likely to engage in smoking, drinking, and drug use later in life. Among girls, this dissatisfaction is also linked to self-harm behaviours, while boys show similar trends in smoking and drug use. Field et al. (2015)[95] emphasised that concerns regarding physique, such as dissatisfaction with muscularity or thinness, are associated with increased binge drinking and substance abuse.

Cardiovascular disease

Chronic stress caused by body dissatisfaction and weight-based discrimination has notable cardiovascular implications. Stress activates physiological pathways that contribute to elevated blood pressure, cholesterol levels, and systemic inflammation (Tomiyama, 2014)[96]. Additionally, behaviours like binge eating, often linked to body dissatisfaction, are associated with metabolic syndrome, further exacerbating cardiovascular risks (Hudson et al., 2010).[97]

These behaviours also impact systemic inflammation, which has been associated with numerous long-term health issues, including cardiovascular disease, Type 2 diabetes, and metabolic syndrome[98].

Chronic stress from weight stigma is particularly damaging, triggering cortisol dysregulation and amplifying inflammatory responses (Puhl & Suh, 2015)[99].

Social inclusion

Engagement with individuals with lived experience highlighted social inclusion as a significant challenge for people affected by body dissatisfaction and weight-based discrimination. These issues profoundly impact a sense of belonging, as they often lead to social withdrawal. Rodgers et al. (2015)[100] found that adolescents experiencing weight stigma reported higher levels of bullying and exclusion, contributing to long-term social isolation and reduced opportunities for meaningful community engagement. Similarly, Tiggemann and Slater (2014)[101] found that body dissatisfaction was significantly related to lower social engagement among adolescents.

In particular, young people who internalise negative body image tend to withdraw from social settings, reducing their opportunities to form supportive peer relationships. A study by Paxton et al. (2015)[102] found that adult women with negative body image were less likely to participate in community events and social networks, leading to a reduced sense of inclusion in social life.

"This experience is new to me because I was much thinner before, and now I clearly notice the difference in how people treat me. It feels like I have to navigate the world differently, adjusting how I approach others. I've had to relearn social cues and become more aware of how casual fatphobia shows up in conversations"

The Appearance Ideals Survey revealed that negative body image often prevents individuals from engaging in various activities. Notably, there was significant disengagement from activities such as going to the beach or pool, pursuing romantic relationships, and shopping for clothes (see Appendix B, Figure B.7).

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*This study specifically looked at the impact of BMI. We recognise that BMI is a problematic measure as it can stigmatise weight and oversimplify complex aspects of health and body diversity.

Impacts

School outcomes

Adolescents who face bullying or stigma often struggle with lower academic performance due to absenteeism and disengagement (Pont et al., 2017)[103]. Puhl and Heuer (2010)[104] reported that weight-based teasing in school settings affects students' self-esteem and motivation, reducing their capacity to focus on studies effectively.

> *"High school is so much more challenging when all I want to do is succeed academically but I find myself spending more time worrying about my appearance at school than actually doing school work"*

The influence of body image on educational outcomes was highlighted in the Body Kind Youth Survey (BKYS), which found that nearly one-third of young people surveyed reported that concerns about their body image significantly affected their ability to focus on schoolwork and their confidence to participate in class, such as raising their hand. Additionally, 23.1% indicated that body image concerns frequently or always prevented them from attending school, and 49% reported that body dissatisfaction had kept them from attending school at least once.

Body dissatisfaction has also been associated with long-term educational impacts.

Research by Rosenqvist et al. (2023)[105] revealed that men experiencing body dissatisfaction achieved lower levels of educational attainment at ages 32 and 42, while women were affected throughout their life course.

Work outcomes

In the workplace, weight-based discrimination significantly impacts career opportunities. Puhl et al. (2008)[106] demonstrated that individuals perceived as overweight face barriers in hiring and career advancement. This is supported by Giel et al. (2010)[107], who found that being higher weight is a general barrier to employment, certain professions and professional success.

In addition to impacting a person's ability to gain employment, and progress within a job once employed, weight-based discrimination impacts a person's level of job satisfaction and productivity. Roehling et al. (2007)[108] found a clear association between weight-based discrimination and poorer workplace evaluations, affecting job satisfaction and retention, while Safi et al. (2022)[109] found that eating disorder and body image issues can result in higher rates of absenteeism and presenteeism, reducing overall job performance.

Time and spending on appearance

Appearance-based discrimination and body dissatisfaction can drive individuals to spend more on their appearance in an effort to meet societal beauty standards and mitigate negative perceptions. Mafra et al (2022)[110] found that women with a higher "appearance orientation"*—spent more money on makeup. Additionally, the study revealed that social self-esteem and general self-esteem also positively predicted money spent on makeup, suggesting that individuals use cosmetics not only to feel better about themselves but also to improve their social standing or to meet societal standards of beauty.

The Appearance Ideals survey revealed that among respondents who reported spending on appearance-altering products, skincare, makeup, and diet and exercise products were the most commonly purchased. However, the highest average spending was observed in categories such as surgical procedures and "other" items, which include hair care, waxing, nails, and clothing (see Appendix B, Table B.4).

*Appearance orientation measures the importance attributed to their own appearance, such as how important they think it is to always look good, appearance evaluation measures how attractive the individual considers themselves, how satisfied they are with their own body.

Impacts

Quality of life

Body dissatisfaction and appearance-based discrimination have far-reaching consequences that significantly diminish an individual's overall quality of life.

These issues affect mental, physical, and social dimensions, creating a cumulative burden that impacts day-to-day functioning and life satisfaction. For instance, research indicates that individuals experiencing body dissatisfaction report poorer mental health, including heightened anxiety and depression, which directly correlates with lower quality of life scores (Griffiths et al., 2016).[111]

Mond et al. (2013)[112] explored the relationship between body dissatisfaction and quality of life among a sample of women in Australia aged 18 to 42 years, and found higher levels of body dissatisfaction were associated with poorer quality of life. Griffiths et al (2017)[113] has also looked at quality of life impacts, among girls and boys in Australia aged 12 to 18 years. The authors found that, although body dissatisfaction is higher among girls, the strength of the adverse association between body dissatisfaction and quality of life was consistent between the two genders. On a professional level, appearance-based discrimination exacerbates inequalities, limiting career opportunities and financial stability, further affecting quality of life. Furthermore, avoidance behaviours, such as skipping medical care or engaging in disordered eating, negatively influence physical health, compounding the long-term impact.

> *"Appearance-based discrimination impacts my quality of life as when seeking advice from GPs about non-related issues they tend to bring up weight and reinforce the idea that my body doesn't look good."*

In addition, the Appearance Ideals Survey asked respondents who reported experiencing body dissatisfaction how feelings about their appearance impacted various aspects of their daily lives, including physical health, emotional wellbeing, social interactions, and living environment. The results showed that women in the 35-44 age group were most affected, with 78% reporting that body dissatisfaction had a "very negative" or "somewhat negative" impact on their lives. For men, those in the 45-54 age group reported the most significant negative effects, with 76% indicating similar outcomes (see Appendix B, Figures B.10 & B.11).

For those who experienced appearance-based discrimination, the survey also explored how these experiences affected respondents daily lives. The results revealed that women in the 55-64+ age group were most impacted, with 42% reporting a "very negative" effect on their lives, while only 7% of those aged 18-24 indicated a "very negative" impact. For men, the most significant negative effects were seen in those aged 45-64 years (Appendix B, Figure B.12 & Figure B.13).

Impacts

Estimating the proportion of each impact attributed to body dissatisfaction and weight-based discrimination

As previously described, it is the impacts associated with body dissatisfaction and appearance-based discrimination that predominantly drive economic and social cost. However, these impacts are influenced by other factors, not solely limited to body dissatisfaction and appearance-based discrimination. To understand the contribution of body dissatisfaction and appearance-based discrimination, we have relied on published literature to estimate the proportion of these impacts that can be attributed to them. These proportions are referred to within the literature as Population Attributable Fractions (PAFs)[114.] The PAF represents the proportional reduction in population disease or mortality that would occur if exposure was reduced to zero. The PAFs in this analysis were derived using the following formula:

$$PAF = \frac{P(RR-1)}{P(RR-1)+1}$$

Where:

- P represents the prevalence of body dissatisfaction or appearance-based discrimination; and
- RR represents the relative risk of impact.

Population attributable fractions used within the analysis

Table 5.1: Prevalence and odds ratios/relative risks of impacts associated with body dissatisfaction and weight-based discrimination

Domain	Impact	OR/HR/RR		Sources	Study Type
		Female	Male		
Body dissatisfaction	Depression	1.67	2.85	Bornioli et al (2020)[115] Based on severe episodes	Longitudinal
	Anxiety	1.87	1.87	Dooley et al (2015)[116] Based on moderate and severe episodes	Randomised sample
	Eating disorders	2.3	1.87	F: Stice et al (2017)[117] M: Neumark-Sztainer (2006)[118]	Longitudinal
	Suicide attempts	1.81	2.23	Crow et al (2008)[119]	Longitudinal
	Self-harm	1.44	-	Bornioli et al. (2019)[120]	Longitudinal
	Smoking	1.4	1.44	Bornioli et al. (2019)[120]	Longitudinal
	Alcohol and drug use	1.37	2.13	F OR: Bornioli et al. (2019)[120], Average across cannabis use, drug use and high-risk drinking M: Field et al (2014)[121]	Longitudinal
Weight-based discrimination	Depression	1.51	1.51	Robinson et al. (2017)[122]	Longitudinal
	Anxiety	2.39	2.39	Hatzenbuehler (2009)[123]	Cross-sectional
	Smoking	1.33	1.33	Sutin et al. (2020)[124]	Longitudinal
	Increased risk of physical health conditions*	6.67	6.67	Jackson (2014)[125]	Longitudinal
	Alcohol use	1.37	1.37	Sutin et al. (2020)[126]	Longitudinal
	Drug use	1.52	1.52	Sutin and Terracciano (2017)[127]	Cross-sectional
	Eating disorders	1.91	1.91	Sutin et al. (2020)[128]	Longitudinal

*This study looked at the association between perceived weight discrimination and changes in weight, waist circumference and weight status. Instead of focusing this impact on a person's 'weight', we have reframed it to focus on the increased risk of physical health conditions, which is what ultimately drives adverse health and social impacts and the associated burden of disease.

06 Economic and social costs

In 2023, body dissatisfaction and weight-based discrimination cost Australia...

Body dissatisfaction

$36.6b

$11.1b
Economic costs

$25.5b
Loss of wellbeing

Weight-based discrimination

$27.6b

$9.4b
Economic costs

$18.3b
Loss of wellbeing

"Managing the effects of discrimination—binge eating, disrupted sleep, migraines, and declining mental health—has forced me to spend more on interventions and support. The need for frequent medical appointments means taking time off work, reducing my income and makes it harder to cover essentials like food, rent, and utilities. This creates a cycle where the financial strain worsens, leaving me struggling to manage both the direct costs of treatment and the broader impact on my daily living expenses."

The economic and social cost of body dissatisfaction and weight-based discrimination

As described, body dissatisfaction and weight-based discrimination result in a range of impacts, and these impacts drive costs to individuals, workplaces, governments and society.

To assess the impact of body dissatisfaction and weight-based discrimination, the following types of economic and social costs have been estimated:

Economic costs:

- **Health system costs,** representing costs that are attributable to the health care system. These costs account for increased health care utilisation caused by poorer health outcomes, including anxiety, depression, eating disorders and other related conditions and includes costs for medical services and pharmaceuticals;
- **Productivity costs**, accounting for the loss of productive capacity due to illness or mortality. This category also includes costs associated with absenteeism and presenteeism; and
- **Efficiency costs,** that account for reduced efficiency from the loss of tax revenue and the need to levy additional taxation to fund service provision.

Social cost:

- **Loss of wellbeing**, accounting for the reduction in quality of life due to impaired functioning or death that results from conditions related to body dissatisfaction and weight-based discrimination.

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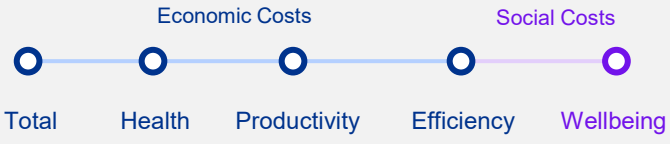
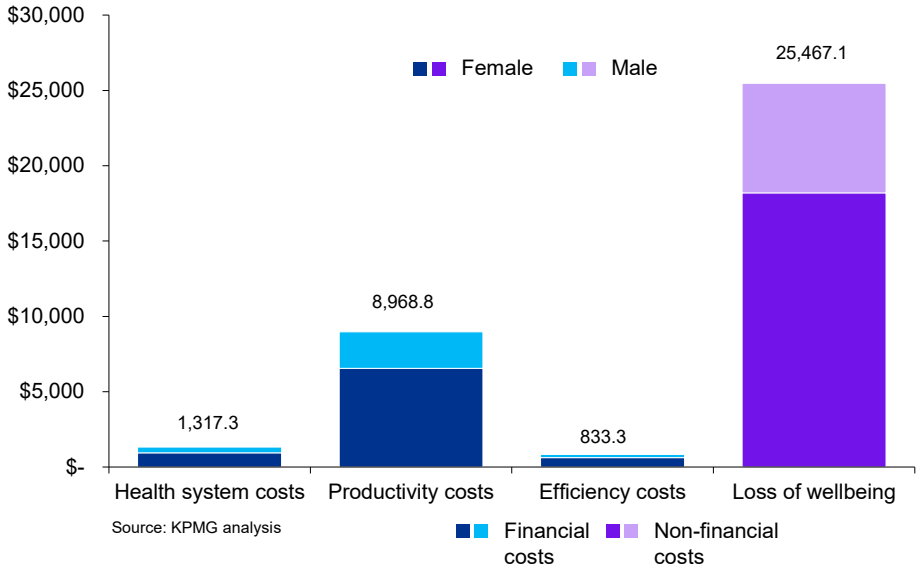


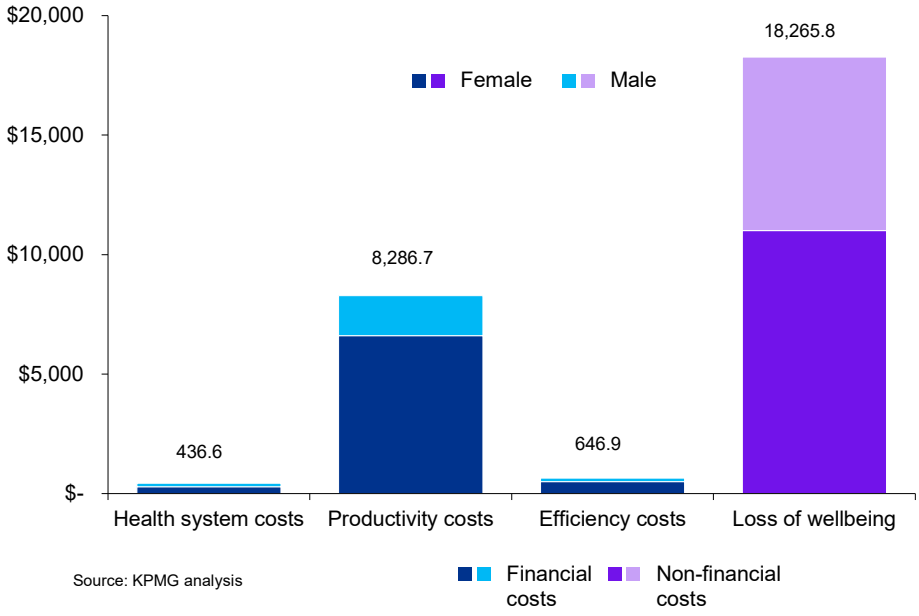
Source: KPMG analysis

Figure 6.1 Costs of body dissatisfaction by cost type in 2023 ($, millions)



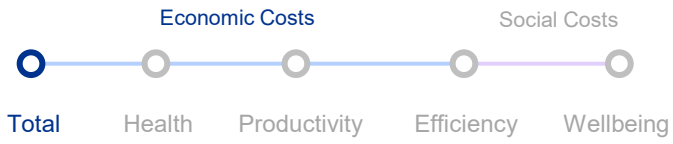
Source: KPMG analysis

Figure 6.2 Costs of weight-based discrimination by cost type in 2023 ($, millions)



Source: KPMG analysis

The economic cost



Body dissatisfaction

The cost of body dissatisfaction was estimated to be **$36.6 billion** in Australia in 2023. Financial costs account for $11.1 billion with an additional $25.5 billion in non-financial costs, reflecting the loss in wellbeing associated with body dissatisfaction. Noting the greater prevalence of body dissatisfaction, females accounted for 71.9%, or $26.3 billion, of costs, with total financial costs per female being over $250 greater than per male primarily driven by higher productivity costs among females, particularly due to the impact of body dissatisfaction leading to eating disorders.

It is estimated that each person with body dissatisfaction aged over 15 years **costs the Australian economy $2,685 per year**. Reduced productivity, through presenteeism, absenteeism, premature mortality, informal care and reduced employment opportunities, accounts for over 80.7% or $8.9 billion in costs.

The analysis shows that most of the burden associated with body dissatisfaction is borne by individuals. Individuals accounted for $6.5 billion or 58.5% of costs. Individual costs are largely driven by reduced employment opportunities and health related costs including allied health services, private hospital services and dental expenses.

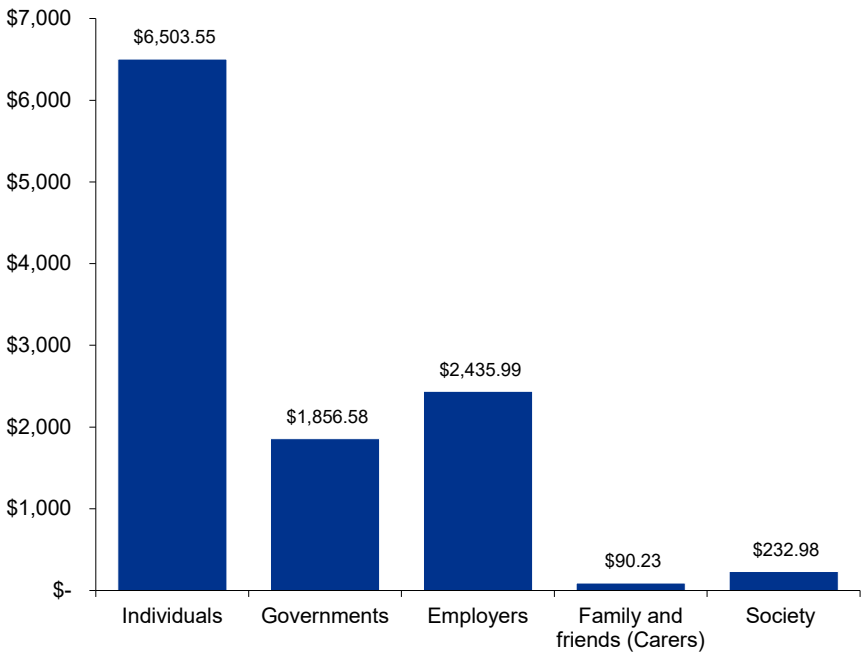
Beyond individuals, employers also bear a large proportion of costs, accounting for an additional 21.9%, or $1.9 billion. These costs are driven relatively equally by presenteeism and absenteeism, accounting for just over $1.2 billion each per year. governments also bear an additional $1.9 billion in costs.

Table 6.1: Financial costs due to body dissatisfaction in 2023

Cost type	Total cost ($, m)	Proportion of total financial cost ($, m)	Cost per person with body dissatisfaction (15 years and over)	Cost per female with body dissatisfaction (15 years and over)	Cost per male with body dissatisfaction (15 years and over)
Health system costs	$1,317	11.8%	$318	$318	$318
Productivity costs	$8,969	80.7%	$2,166	$2,230	$2,010
Efficiency costs	$833	7.5%	$201	$212	$176
Total	**$11,119**	**100%**	**$2,685**	**$2,759**	**$2,504**

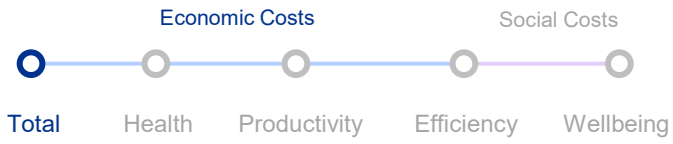
Source: KPMG analysis

Figure 6.3 Financial costs of body dissatisfaction by payer in 2023 ($, millions)



Source: KPMG analysis

The economic cost



Weight-based discrimination

The economic and social cost of weight-based discrimination was estimated to be **$27.6 billion** in Australia in 2023. Financial costs account for $9.4 billion with an additional $18.3 billion in non-financial costs, reflecting the loss in wellbeing associated with body dissatisfaction. Noting the greater prevalence of weight-based discrimination, females accounted for 66.6%, or $18.4 billion, of costs. Additionally, the per-person cost for females experiencing weight-based discrimination was over $3,500 higher than that of males. This is primarily due to weight-based discrimination leading to reduced employment opportunities for females.

It is estimated that each person who has experienced weight-based discrimination aged over 15 years, **costs the Australian economy $6,593 per year**. Similarly to body dissatisfaction, reduced productivity, through presenteeism, absenteeism, premature mortality, informal care and reduced employment opportunities, accounts for over 88.4% or $8.3 billion in costs.

The analysis shows that most of the burden associated with weight-based discrimination are borne by individuals. Individuals accounted for $7.2 billion or 77.8% of costs.

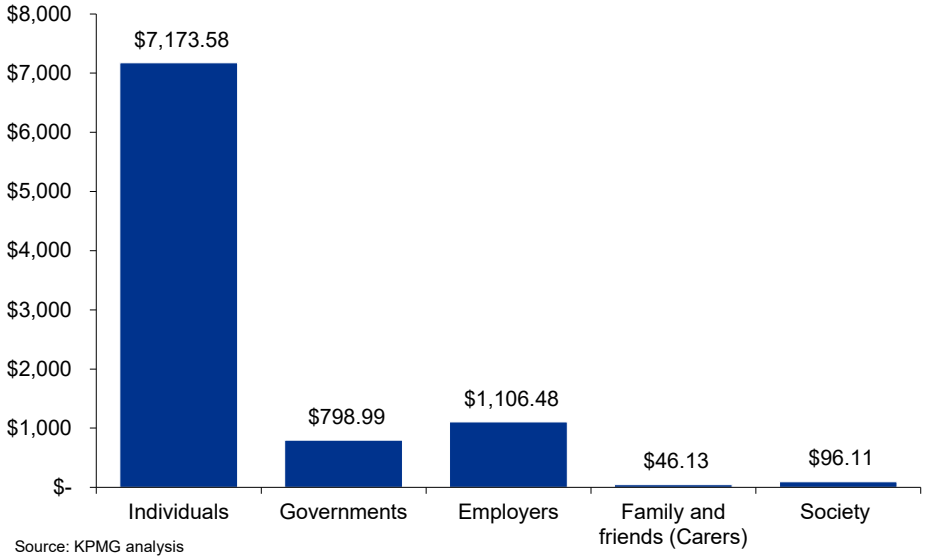
Beyond individuals, employers also bear a large proportion of costs, accounting for an additional 12.0%, or $1.1 billion. Absenteeism contributed 55.7% or $613 million of total employer-based costs. Governments (8.7%), society (1.0%) and family and friends in their role as carers (0.5%) were minor contributors to the costs associated with weight-based discrimination.

Table 6.2: Financial costs of weight-based discrimination in 2023

Cost type	Total cost ($, M)	Proportion of total financial cost ($, M)	Cost per person with weight-based discrimination (15 years and over)	Cost per female with weight-based discrimination (15 years and over)	Cost per male with weight-based discrimination (15 years and over)
Health system costs	$437	4.7%	$307	$307	$307
Productivity costs	$8,287	88.4%	$5,831	$6,978	$3,535
Efficiency costs	$647	6.9%	$455	$530	$306
Total	**$9,370**	**100%**	**$6,593**	**$7,815**	**$4,148**

Source: KPMG analysis

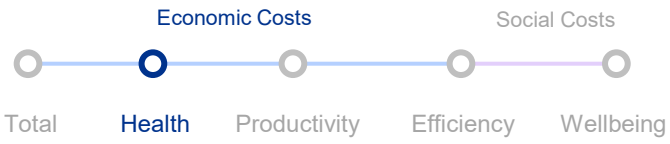
Figure 6.4: Financial costs of weight-based discrimination by payer in 2023 ($, millions)



Source: KPMG analysis

The economic cost

Health system costs



The Australian health system is complex with services provided by a variety of public, private and not-for-profit organisations. In considering the costs associated with body dissatisfaction and weight-based discrimination a range of health-related costs were considered. These include:

- Medical services such as GP visits, admitted and non-admitted public hospital services, Emergency Department visits, private hospital services and specialist services;
- Allied health services;
- Diagnostics, including pathology, and imaging;
- The provision of medication through the Pharmaceutical Benefits Scheme; and
- Dental services and a variety of unallocated health care costs.

While it is acknowledged that there are a range of health impacts associated with body dissatisfaction and weight-based discrimination, due to data limitations the analysis focuses on the costs associated with eating disorders, suicidality and self-harm, substance abuse, anxiety and depression.

Body dissatisfaction

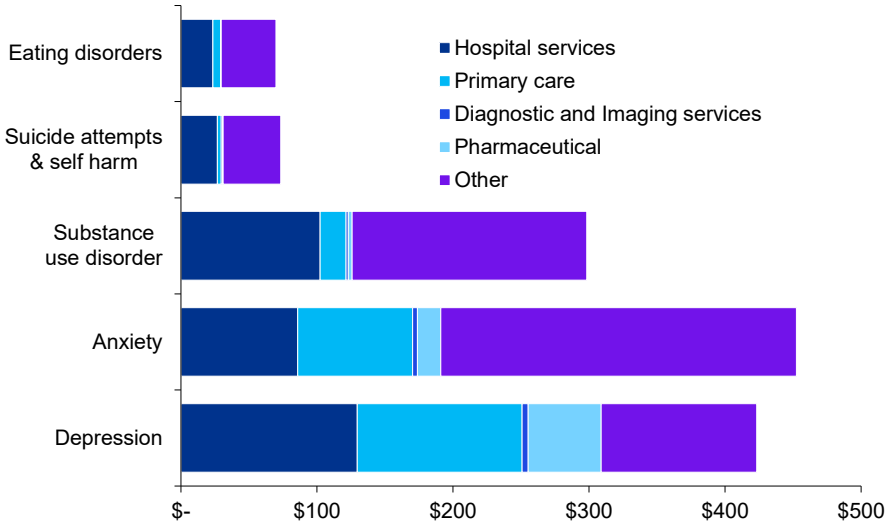
Health costs associated with body dissatisfaction accounted for $1.3 billion# in costs in 2023. These cost are largely driven by anxiety, depression and substance use disorders.

Anxiety accounts for $452.5 million in costs, with the majority of costs being incurred through other unallocated costs*, hospital and primary care services.

Depression accounted for approximately $423 million in costs in 2023. Hospital and primary care services contributed the largest portion of costs accounting for 30.6% and 27.5% of depression related costs, respectively. Other unallocated costs, while less than for anxiety, still accounted for 27.0% of total depression related expenses.

Similarly to anxiety, unallocated health costs contributed the largest amount to substance abuse disorder expenses, accounting for 57.8% of the $298 million in costs. Hospital costs were also a significant contributor, accounting for over one-third of costs.

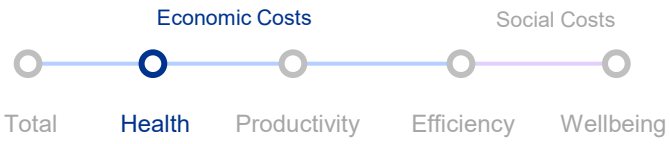
Figure 6.5: Health system costs ($, millions) attributable to body dissatisfaction in 2023, by health condition and cost type



Source: KPMG analysis

See Appendix C – Table C.1 for additional detail.

*AIHW only included 73% of total recurrent health expenditure in its estimates of expenditure by disease, referred to as 'allocated' health expenditure. This 'unallocated' remainder (27%) included capital expenditures, expenditure on community health, public health programs, health administration and health aids and appliances. This has been accounted for through the 'other' category.



The economic cost

Health system costs

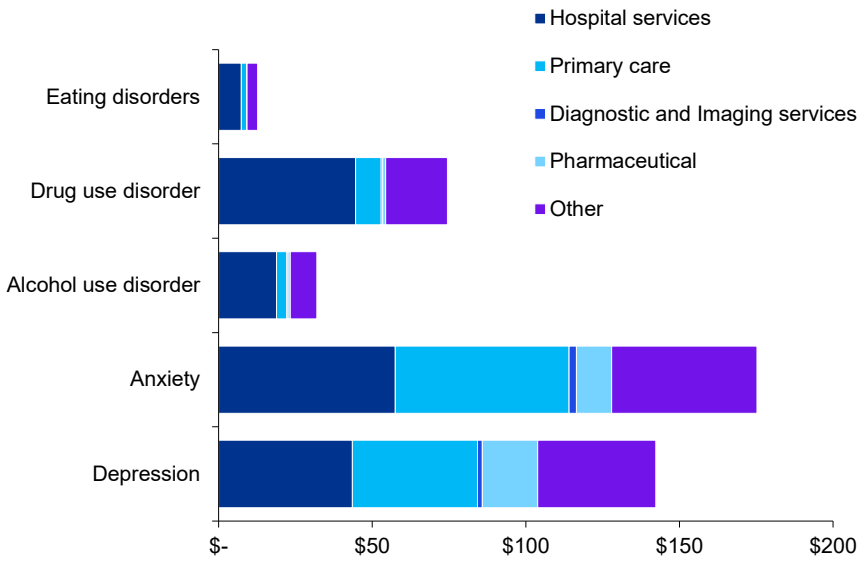
Weight-based discrimination

During 2023, expenses associated with weight-based discrimination cost the health system **$436.6 million#**. Similarly to body dissatisfaction, costs associated with anxiety and depression accounted for the majority of costs.

Anxiety accounts for 40.1% of health costs, with the main cost drivers for anxiety being hospital and primary care services. Costs associated with depression accounting for an additional 32.2% of health-related costs. Drug and alcohol use disorders were also strong contributors, with hospital services for these conditions accounting for approximately 10.1% of total health costs.

Pharmaceutical costs, while making up a small proportion of costs across weight-based discrimination and body dissatisfaction, were relatively higher in weight-based discrimination. Similarly, hospital and primary care services accounted for a greater proportion of costs related to weight-based discrimination compared to body dissatisfaction.

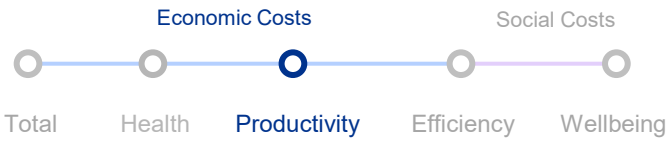
Figure 6.6: Health system costs ($m) attributable to weight-based discrimination in 2023, by health condition and cost type



Source: KPMG analysis

See Appendix C – Table C.1 for additional detail.

*The other category includes capital expenditures, expenditure on community health, public health programs, health administration and health aids and appliances. Additional explanatory note is available on page 43.



The economic cost

Productivity costs

As described, productivity losses account for the loss of productive capacity due to illness or mortality. This category also includes costs associated with absenteeism and presenteeism, reduced employment opportunities and informal care.

Productivity costs are a large contributor to the societal and economic costs of many health conditions. This includes direct impacts through conditions such as depression and anxiety and other related conditions.[#]

Body dissatisfaction

Loss of productive capacity was the leading contributor to costs associated with body dissatisfaction. In 2023, **productivity losses contributed 80.7%, or $9.0 billion** to the total economic costs incurred in Australia through body dissatisfaction.

Anxiety, depression and eating disorders contributed the majority of costs incurred through productivity losses. In total, productivity losses associated with anxiety contributed $3.7 billion, with an additional $2.8 billion and $2.3 billion being contributed by eating disorders and depression respectively.

Reduced employment and employment opportunities were key drivers of losses in productive capacity, **accounting for $6.2 billion in lost productive capacity**. Reduced employment accounted for 53.6% of costs associated with eating disorders, 77.0% of productive losses associated with depression and 78.3% of costs associated with anxiety.

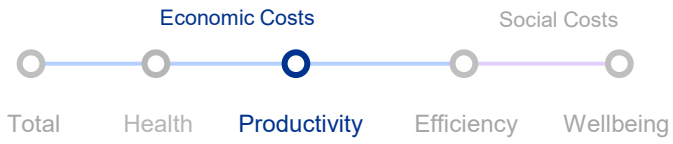
Absenteeism, presenteeism and informal care were also significant contributors to productive losses, accounting for a combined $2.5 billion in 2023. In contrast to anxiety and depression, presenteeism contributed a larger proportion of productive losses through eating disorders.

Table 6.4: Annual productivity losses due to body dissatisfaction in 2023 ($, millions)

Labour market outcome	Absenteeism	Presenteeism	Informal care	Reduced employment	Premature mortality	Total	Total cost per person ($)	Total cost per female ($)	Total cost per male ($)
Depression	$319	$133	$26	$1,741	$43	$2,260	**$546**	**$560**	**$511**
Anxiety	$526	$219	$42	$2,932	$19	$3,739	**$903**	**$849**	**$1,035**
Eating Disorders	$266	$817	$22	$1,481	$170	$2,756	**$666**	**$800**	**$338**
Substance Disorders	$105	$43	$ -	$ -	$ -	$149	**$36**	**$16**	**$85**
Suicide Attempts	$8	$ -	$1	$56	$ -	$64	**$15**	**$5**	**$41**
Total	**$1,224**	**$887**	**$89**	**$6,210**	**$232**	**$8,969**	**$2,166**	**$2,230**	**$2,010**

Source: KPMG analysis

[#] See Appendix C – Table C.2 for additional detail



The economic cost

Productivity costs

Weight-based discrimination

Loss of productive capacity was also the leading contributor to costs associated with weight-based discrimination. In 2023, **productivity losses contributed approximately 88.5%, or $8.3 billion** to the total costs incurred in Australia through weight-based discrimination.*

Direct weight discrimination, or the reduced employment opportunities available to people living in a larger body, and those with anxiety and depression were the leading contributors to losses in productive capacity.

In total, productivity losses associated with weight-based discrimination contributed $3.8 billion, anxiety contributed $2.6 billion, with an additional $863 million and $937 million being contributed by depression and eating disorders respectively.

As identified, direct weight discrimination was the largest contributor to losses in productive capacity. Direct weight discrimination accounts for losses in productive capacity to people being unable to find work or being directly discriminated against due to their weight.

"The issues that I have experienced in the last six months resulted in work absenteeism, reduced job performance, and a lack of sleep and appetite"

Table 6.5: Annual productivity losses due to weight discrimination in 2023 ($, millions)

Labour market outcome	Absenteeism	Presenteeism	Informal care	Reduced employment	Premature mortality	Total	Total cost per person ($)	Total cost per female ($)	Total cost per male ($)
Depression	$113	$47	$9	$674	$20	$863	**$607**	**$445**	**$972**
Anxiety	$369	$153	$29	$2,061	$21	$2,633	**$1,853**	**$1,831**	**$1,897**
Eating Disorders	$89	$275	$8	$509	$56	$937	**$660**	**$691**	**$599**
Alcohol use	$33	$14	$ -	$ -	$ -	$46	**$33**	**$20**	**$59**
Drug use	$8	$3	$ -	$ -	$ -	$12	**$8**	**$8**	**$8**
Direct weight discrimination	$ -	$ -	$ -	$3,794	$ -	$3,794	**$2,669**	**$4,004**	**$-**
Total	**$613**	**$493**	**$46**	**$7,037**	**$96**	**$8,287**	**$5,831**	**$6,999**	**$3,535**

Source: KPMG analysis

The economic cost

Efficiency costs

Efficiency losses refer to reduced tax revenue and the need for higher taxes to fund services. This report considers losses from consumer and corporate taxes. Consumer tax losses occur when workers limit employment or take unpaid sick leave, reducing income tax revenue. Company tax losses arise when businesses lose revenue due to worker absences or reduced productivity, leading to lower corporate tax contributions.[#]

Body dissatisfaction

Body dissatisfaction contributed $833 million in efficiency losses during 2023, equivalent to $201 for each person with body dissatisfaction. These costs were made up of $459 million in forgone consumer tax revenue and $374 million in foregone company tax receipts. Anxiety, eating disorders and depression accounted for 96.4% of efficiency losses in 2023.

Anxiety was the leading driver of reduced consumer taxes, accounting for $215 million, or 46.8% of forgone consumer taxes. Interestingly, eating disorders were the largest contributor to reduced company taxes, accounting for $164 million or 43.9% of total losses. This may be driven by the larger proportion of absenteeism and presenteeism in this cohort.

Weight- based discrimination

Weight-based discrimination contributed $647 million in efficiency losses during 2023, equivalent to $455 for each person who experienced discrimination due to their weight.

These costs were made up of $476 million in forgone consumer tax revenue and $171 million in foregone company tax receipts. Anxiety and direct weight discrimination account for 72.5% of efficiency losses due to weight-based discrimination.

Direct weight discrimination was the leading driver of reduced consumer taxes, accounting for $236 million, or 49.6% of forgone consumer taxes. Anxiety was the largest contributor to reduced company taxes accounting for $82 million or 48.0% of lost company tax revenue.

Table 6.6: Annual efficiency losses due to body dissatisfaction in 2023 ($, millions)

Efficiency loss	Consumer tax	Company tax	Total	Total cost per person ($)	Total cost per female ($)	Total cost per male ($)
Depression	$128	$71	$199	$48	$51	$42
Anxiety	$215	$117	$332	$80	$77	$87
Eating Disorders	$109	$164	$273	$66	$80	$31
Substance Use Disorders	$7	$22	$29	$7	$3	$16
Suicide Attempts	$0.5	$1	$1.5	$0.4	$0.3	$1
Total	**$459**	**$374**	**$833**	**$201**	**$212**	**$176**

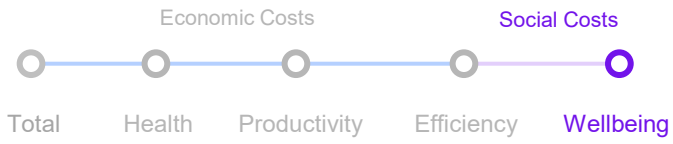
Source: KPMG analysis

Table 6.7: Annual efficiency losses due to weight discrimination in 2023 ($, millions)

Efficiency loss	Consumer tax	Company tax	Total	Total cost per person ($)	Total cost per female ($)	Total cost per male ($)
Depression	$49	$25	$74	$52	$38	$80
Anxiety	$151	$82	$233	$164	$179	$159
Eating Disorders	$37	$56	$92	$65	$82	$54
Alcohol use	$2	$7	$9	$6	$5	$11
Drug use	$0.5	$2	$2	$2	$2	$1
Weight discrimination	$236	$-	$236	$166	$484	-
Total	**$476**	**$171**	**$647**	**$455**	**$530**	**$306**

Source: KPMG analysis

[#] See Appendix C – Table C.4 for additional detail.



The social cost

Wellbeing costs

Cost associated with reduced wellbeing values the outcomes of living with body dissatisfaction and weight-based discrimination. Outcomes are measured in terms of years of life lost (YLL) which accounts for premature mortality and years lived with disability (YLD) representing years lived in less than perfect health due to disease of a health condition. These are combined to determine disability-adjusted life years (DALYs), which accounts for both the years of life lost, and the number of years lived with a disability. DALYs can be converted to a monetary value to account for the economic costs of changes in an individual's wellbeing.#

The costs associated with lost wellbeing are significant contributors to overall costs:

$25.5b

Value of lost wellbeing associated with **body dissatisfaction**

$18.3b

Value of lost wellbeing associated with **weight-based discrimination**

For body dissatisfaction, smoking was the leading contributor to DALYs accounting for 26,606 DALYs. This was valued at $6.3 billion and accounts for 24.6% of lost wellbeing. Depression, anxiety and eating disorders were also significant contributors, adding $5.1 billion, $4.9 billion and $2.5 billion in reduced wellbeing costs respectively.

Wellbeing losses associated with weight-based discrimination were driven by the increased risk of developing certain physical health conditions.* The increased risk contributed 42.4% or $7.7 billion in reduced wellbeing costs in 2023 and accounted for 32,970 DALYs. Similarly to body dissatisfaction, depression and anxiety contributed a combined $5.0 billion in 2023. Eating disorders accounted for less than 4.5% of lost wellbeing in people who faced weight discrimination.

Table 6.8: Annual reduced wellbeing due to body dissatisfaction in 2023

Wellbeing loss	YLLs	YLDs	DALYS	DALYS ($M)	Cost per person ($)	Cost per female ($)	Cost per male ($)
Depression	56	21,596	21,652	$5,088	**$1,228**	**$1,367**	**$891**
Anxiety	16	20,634	20,650	$4,853	**$1,171**	**$1,024**	**$1,532**
Substance Abuse	945	10,124	11,069	$2,601	**$628**	**$278**	**$1,479**
Suicide Attempts & Self-harm	17,651	138	17,789	$4,181	**$1,009**	**$1,222**	**$493**
Eating Disorders	119	10,486	10,605	$2,492	**$601**	**$750**	**$242**
Smoking	19,491	7,115	26,606	$6,252	**$1,510**	**$1,560**	**$1,387**
Total				**$25,467**	**$6,149**	**$6,201**	**$6,024**

Source: KPMG analysis

See Appendix C – Table C.5 for additional detail.

The social cost

Wellbeing costs

Table 6.9: Annual reduced wellbeing due to weight discrimination in 2023

Wellbeing loss	YLLs	YLDs	DALYS	DALYS ($M)	Cost per person	Cost per female	Cost per male
Depression	19	7,259	7,278	$1,710	**$1,203**	**$988**	**$1,635**
Anxiety	11	13,822	13,832	$3,251	**$2,287**	**$2,481**	**$1,899**
Smoking	10,176	3,715	13,890	$3,264	**$2,297**	**$1,287**	**$4,317**
Increased risk of certain physical health conditions*	17,878	15,093	32,970	$7,748	**$5,452**	**$5,306**	**$5,742**
Alcohol use	349	2,201	2,550	$599	**$422**	**$262**	**$740**
Drug use	93	3,785	3,879	$911	**$641**	**$668**	**$589**
Eating disorders	37	3,290	3,328	$782	**$550**	**$622**	**$407**
Total				**$18,265**	**$12,852**	**$11,613**	**$15,328**

Source: KPMG analysis

*Estimates of wellbeing loss associated with the 'increased risk of certain physical health conditions' uses estimates of Years and Life Lived with Disability and Years of Life Lost associated with 'Overweight (including obesity)' as reported by the AIHW. As has been done previously when speaking to the impacts of body dissatisfaction and weight-based discrimination, we have chosen to reframe the cause of wellbeing loss given the 'increased risk of certain physical conditions' is what drives the disease burden and associated wellbeing loss, as opposed to this burden solely being driven by a person's weight. As reported by the AIHW, overweight (including obesity) is linked to 30 diseases, including 17 types of cancers, 4 cardiovascular diseases, 3 musculoskeletal conditions, type 2 diabetes, dementia, asthma and chronic kidney disease.[66]

07 Discussion

The findings of this report highlight the substantial costs of body dissatisfaction and weight-based discrimination in Australia. These costs are driven by mental health and wellbeing impacts, which have far-reaching implications for individuals, families, workplaces, and broader society.

At the individual level, body dissatisfaction contributes to adverse mental health, physical health and social outcomes. These outcomes not only diminish individual wellbeing but also increase demand for health services, contributing to the broader economic costs borne by the health system. Weight-based discrimination, and appearance-based discrimination more broadly, compounds these issues, further affecting a person's mental and physical health, and social outcomes.

From an economic perspective, the costs of body dissatisfaction and weight-based discrimination are multifaceted. Direct healthcare costs, including treatment for eating disorders and other mental health conditions, represent a significant burden on Australia's healthcare system. Indirect costs, such as lost productivity due to absenteeism and presenteeism, exacerbate the economic impact.

In addition, these issues can restrict labour market opportunities for individuals who face appearance-based discrimination, perpetuating cycles of inequality and economic disadvantage.

There are also considerable costs associated with informal care being provided to individuals facing challenges associated with body dissatisfaction and/or weight-based discrimination, as those providing care face barriers to workforce participation and are themselves at an increased risk of developing certain physical and mental health challenges due to the emotional toll this role can take.

Further, it is again acknowledged that other forms of appearance-based discrimination (beyond weight) have been unable to be quantified, along with many of the impacts associated with body dissatisfaction and weight-based discrimination, such as the costs associated with reduced levels of social inclusion and community engagement felt by individuals facing these issues. If these aspects were able to be quantified, the costs would be considerably higher.

Given the magnitude of these costs, there is a compelling case for Government to address body dissatisfaction and weight-based discrimination.

Tackling these issues aligns closely with both State and Federal Government policy directions, particularly in the context of mental health. At the Federal level, recent national strategies, such as the National Eating Disorders Strategy 2023-2033[129], the National Mental Health and Suicide Prevention Plan[130] and the National Preventive Health Strategy 2021-2030[131], emphasise the importance of promoting mental health, reducing stigma, and addressing the social determinants of health.

Addressing harmful health and body size ideals alongside other risk factors that underpin body dissatisfaction and weight-based discrimination, in addition to other forms of appearance-based discrimination, is consistent with these policy priorities.

Efforts to address and transform harmful perceptions of health and body size should involve collaboration across multiple sectors, such as healthcare, education, media, and community organisations. Public health campaigns can play a role by promoting diverse and inclusive representations of health and body size, while school and workplace programs can create environments that foster body confidence and address weight-based biases. Guidance published by the National Eating Disorders Collaboration on ways information about health, food, minds and body can be communicated safely to our communities, can act as a foundation for campaigns and programs of this nature.[132]

School-based prevention and early intervention programs targeting body image in children in NSW have demonstrated positive outcomes, including enhanced self-esteem, improved body satisfaction, and reduced weight-related concerns among students.[133]

Media, social media and advertising industries also have a responsibility to avoid perpetuating narrow and unrealistic health and body size standards.

Discussion

Evidence from several Australian randomised controlled trials, including Wilksch & Wade (2009)[134], have found that classroom-based social media literacy programs can be effective in reducing eating disorder risk factors including body dissatisfaction.

Legislative frameworks, such as anti-discrimination laws, can further support efforts to combat body dissatisfaction and the different forms of appearance-based discrimination, and create more equitable opportunities for all people in Australia.

Critically, addressing body dissatisfaction and appearance-based discrimination should be seen not only as a public health priority but also as an economic opportunity.

Investments in preventive initiatives targeting these issues have the potential to alleviate the burden on the healthcare system, improve workforce productivity, and enhance overall societal wellbeing. Furthermore, addressing these challenges aligns with broader equity goals, promoting inclusion and reducing disparities across gender, socioeconomic, and cultural lines.

In addition to the limitations of this analysis (provided on page 23), gaps within the existing literature base have been identified through this project.

For body dissatisfaction, these include:

- A skewed focus on female adolescents and young adults;
- Limited research on dissatisfaction across different cultural groups in Australia; and
- Limited research on prevalence data across the lifespan (i.e., children through to late adulthood).

The literature on appearance-based discrimination is considerably scarcer, with limited data and information available for:

- Australia-specific data;
- Australia-specific appearance-based discrimination, other than weight-based;
- Impacts, including workplace experiences, career progression and quality of life;
- Exploration of cultural influences in Australia;
- Information on specific economic costs for Australia;
- Research on how multiple forms of appearance-based discrimination intersect; and
- Data on the direct link between appearance-based discrimination and mental illness in Australia.

There is benefit in future studies working to fill these gaps, to enable a more fulsome picture of appearance-based discrimination and body dissatisfaction prevalence, the associated impacts and cost.

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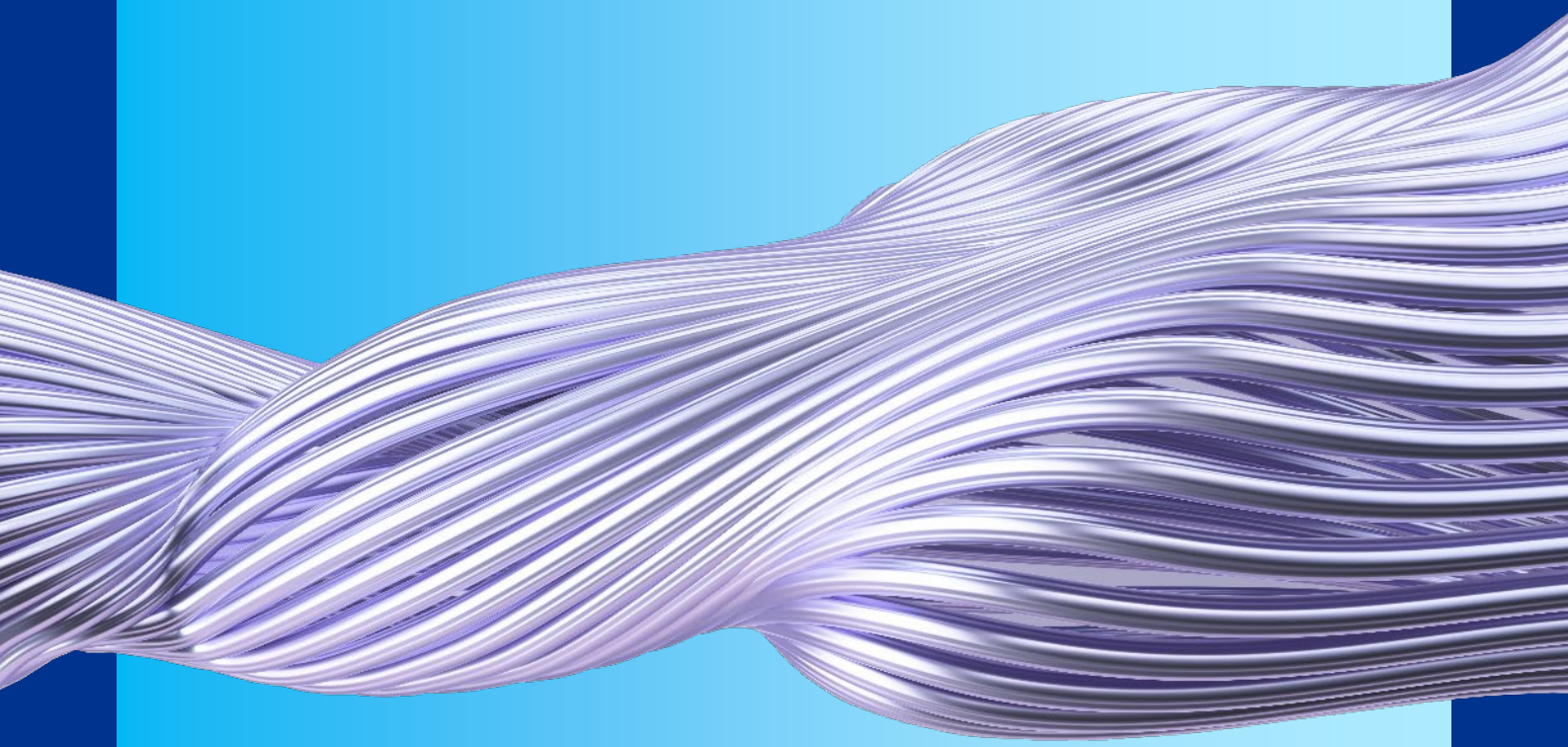
08 Appendices



A: Literature review approach

A quasi-systematic literature review was conducted to identify published studies on body dissatisfaction and appearance-based discrimination. The following questions were used to guide the review:

1. What is the prevalence of body dissatisfaction and appearance-based discrimination in Australia?
2. What health and social impacts are linked to body dissatisfaction and appearance-based discrimination in Australia?
3. What proportion of the identified impacts can be attributed to body dissatisfaction and appearance-based discrimination?
4. What are the costs associated with the impacts attributed to body dissatisfaction and appearance-based discrimination in Australia each year?

Search terms used in the review are provided in **Table A.1** below. The review included searches across various databases, including ProQuest, EBSCO, PubMed, PsycINFO (Ovid), Google Scholar, and EconLit. The process was supplemented with ad-hoc searches using existing search engines and snowballing techniques to broaden the scope.

The review undertook a structured, hierarchical approach for selecting inputs, considering factors such as study quality, generalisability, and internal consistency. Two reviewers independently screened over 15,000 studies, followed by an expert assessment of eligibility.

Table A.1: Literature review search terms

Concept	Terms
Body dissatisfaction	Body dissatisfaction, Negative body image, Body image disturbance, Body image concerns, Body politics, Body appreciation, Appearance dissatisfaction, Appearance evaluation, Appearance, appearance-based, body, physical, skin, hair, shape, weight, disability, age, ideal, satisfaction, self-esteem, attractive, beauty, beauty ideal, Disfigurement, Drive for muscularity, Drive for thinness, Thin privilege, thin ideal, weight stereotypes
Appearance-based discrimination	Weight, shape, skin, hair, height, disability, age, facial feature, physical feature, visible difference, disfigurement, discrimination, perceived discrimination, bias, stigma, White privilege, Lookism
Outcomes and impacts	Mental health, mental ill health, mental illness, Depression, anxiety, suicide, suicidality, suicide attempt, eating disorder, disordered eating, obesity, cardiovascular, cardiovascular disease, metabolic, diabetes, hypertension, inflammation, dieting, weight control, weight cycling, tanning, smoking, surgery, cosmetic surgery, substance abuse, alcohol and other drug, addiction
Population attributable fraction	Prevalence, Frequency, Occurrence, Risk, risk factor, relative risk, risk ratio, effect, odds ratio, population attributable fraction, attribution, correlation, causality, relationship
Cost	Economic, social, cost, impact, Health, community, social, inpatient, outpatient, care, service, cost, Wage, earning, income, employment, education, attainment, Productivity, wage, earning, income, employ, education, education attainment, workforce, training, labour force, volunteering, participation, Quality of life, wellbeing, mortality, QALY, WELLBY, social capital, social cohesion, social engagement, social isolation, connectedness

Source: KPMG analysis

A: Literature review approach

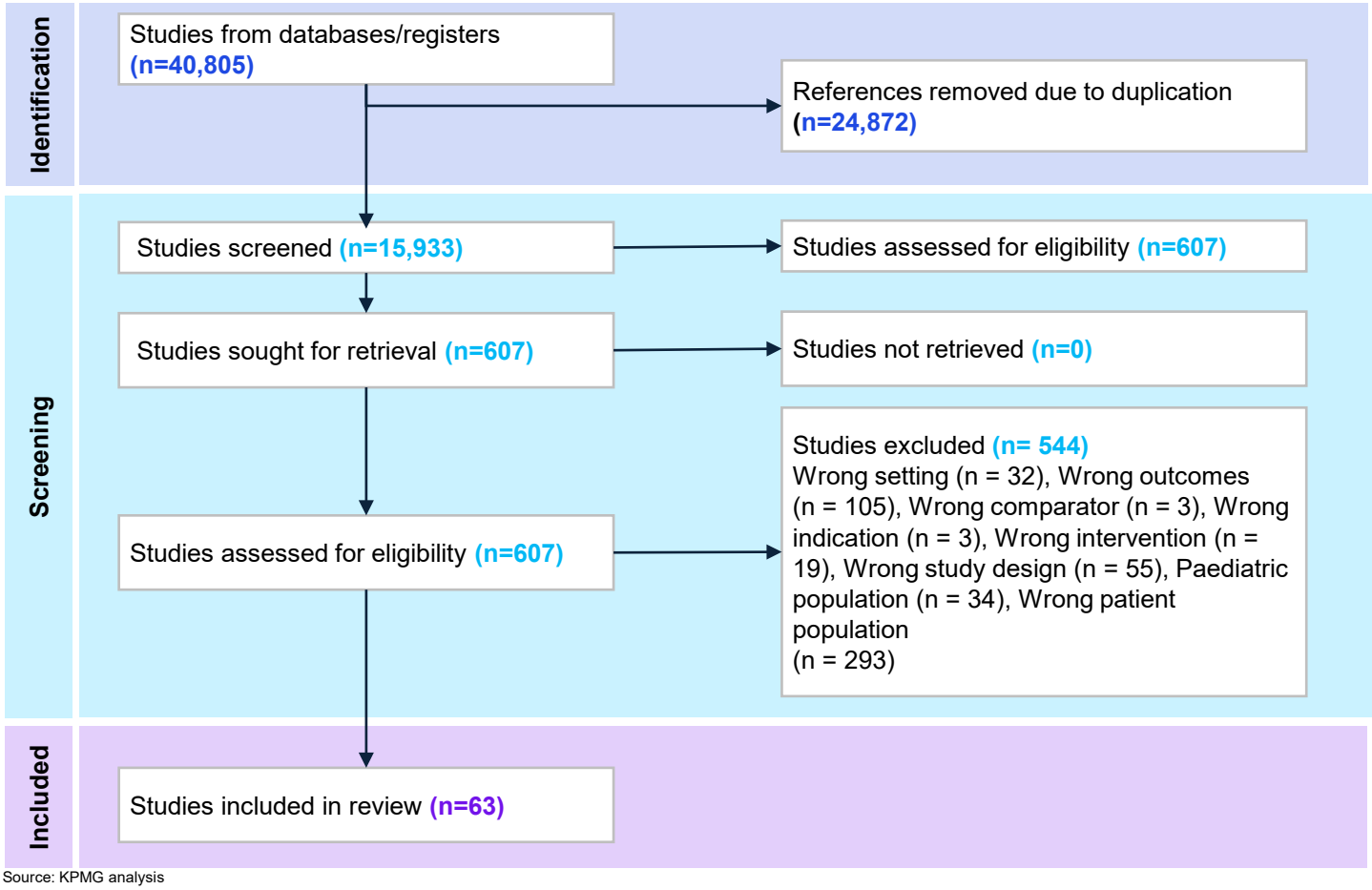
This approach resulted in 63 studies being selected for potential inclusion in the cost model. See **Figure A.1** below for the PRISMA flow diagram of the literature review process.

To assess the quality of evidence, the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach was used. The literature review considered the risk of reporting bias, the precision of effect estimates, the consistency of study results, and how directly the evidence addressed the research questions. Priority was given to causal, longitudinal, and Australian representative studies to ensure the robustness of the inputs.

While efforts were made to include as many impacts as possible in the costing, some were excluded due to limitations in data availability, quality, or relevance. Excluding these impacts was necessary to maintain the reliability of the model, as incorporating low-quality or inconsistent data could undermine the accuracy of the estimated social and economic costs. However, these exclusions may lead to an underestimation of the overall burden, highlighting areas where further research is needed.

Note, these studies were supplemented by more targeted literature searches to inform the cost model and any gaps following the review process.

Figure A.1: PRISMA flow diagram of the literature review process



Source: KPMG analysis

B: Appearance Ideals Survey outputs

As discussed previously, the Appearance Ideals Survey was distributed via Butterfly Foundation channels and a third-party provider.

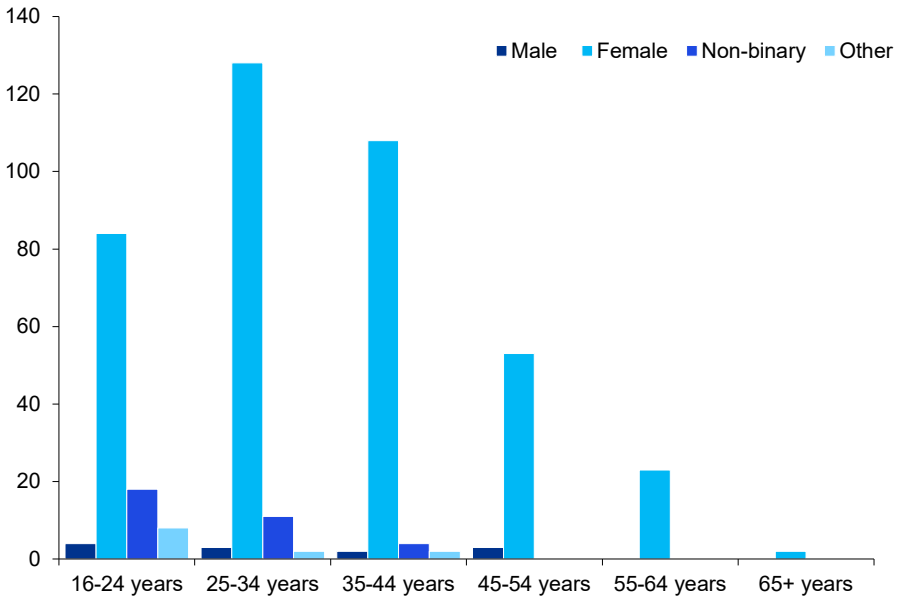
The Butterfly Foundation channels received 455 completed responses, which were used for qualitative analysis to minimise bias in the quantitative data. This survey targeted individuals aged 16 years and older, ensuring that the findings were rooted in lived experiences.

The third-party provider collected 2,016 responses, comprising 1,034 females, 981 males, and one non-binary individual. These responses, gathered from participants aged 18 years and older, were used to inform quantitative analysis. The table below indicates the split of respondents per state.

Table B.1. Third-party responses, by jurisdiction

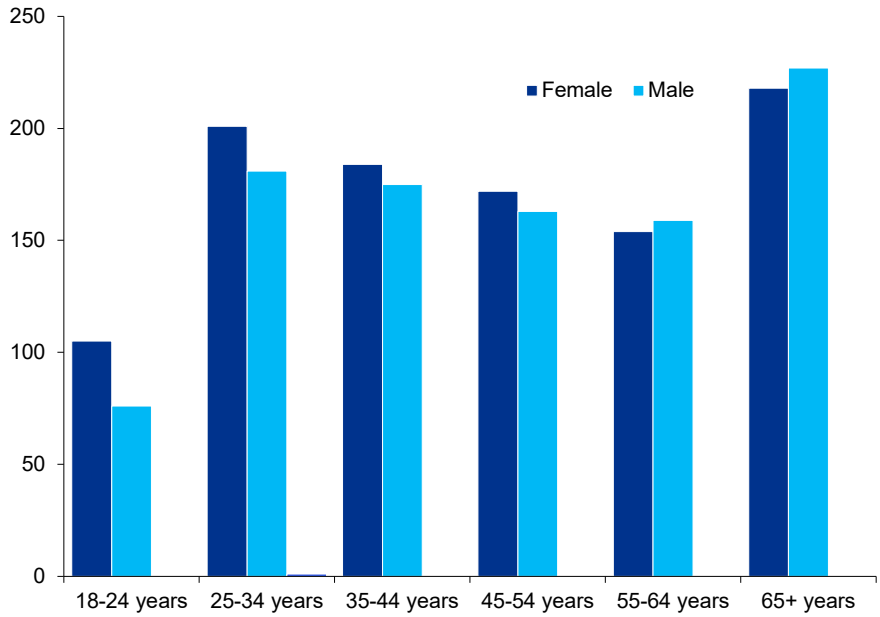
Jurisdiction	# responses
ACT	40
NSW	635
NT	14
QLD	400
SA	149
TAS	41
VIC	522
WA	215

Figure B.1. Butterfly channel responses, by age and gender



Source: KPMG analysis

Figure B.2. Panel responses, by age and gender



Source: KPMG analysis

B: Appearance Ideals Survey outputs

Body Dissatisfaction

Table B.2. indicates that body dissatisfaction shows minimal variation between those engaged (18.15%) and not engaged (18.94%) in education or training but is slightly more pronounced among workforce participants (18.87%) compared to non-participants (16.81%).

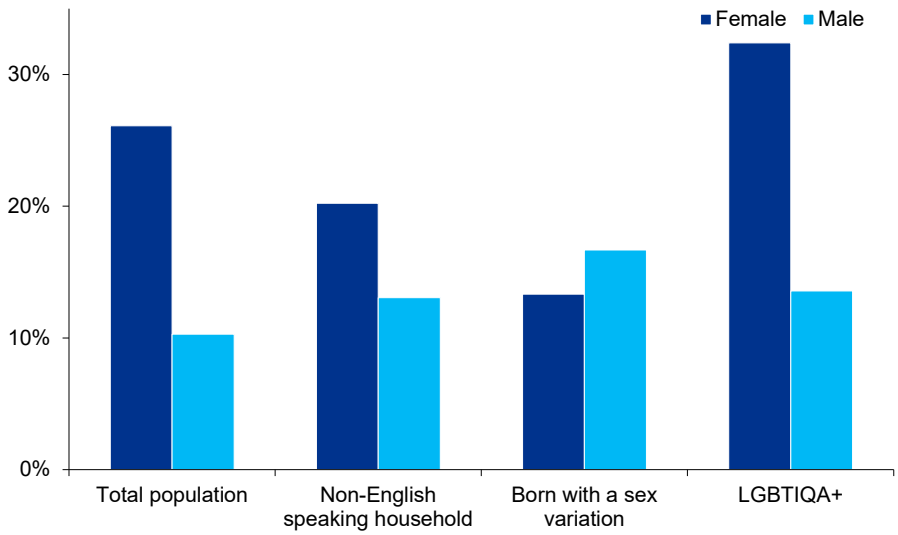
Table B.2. Prevalence of body dissatisfaction by training/education and workforce participation

	Yes	No
Engaged in education or training	18.15%	18.94%
Participating in the workforce	18.87%	16.81%

Source: KPMG analysis

Figure B.3. shows a consistently higher prevalence of dissatisfaction among females, across all demographics, except for those born with sex variations, where males report slightly higher levels of dissatisfaction. LGBTQIA+ females have particularly high prevalence, higher than the average overall (represented as 'total population').

Figure B.3: Prevalence of body dissatisfaction across key demographics, by gender, 18+



Source: KPMG analysis

B: Appearance Ideals Survey outputs

Body Dissatisfaction

Figure B.4 shows that, for individuals experiencing body dissatisfaction, most respondents indicated that they wished to be musclier (72.5%) compared to 6.5% who wished they were less muscly. While 21.0% were satisfied with their muscularity.

Figure B.5 shows that, for individuals experiencing body dissatisfaction, most respondents indicated they wished to be thinner/leaner (88.9%) compared to 5.7% who wished they were larger/heavier. Far fewer respondents (5.4%) were satisfied with their weight given high body dissatisfaction.

Figure B.4. Desire for muscularity given body dissatisfaction

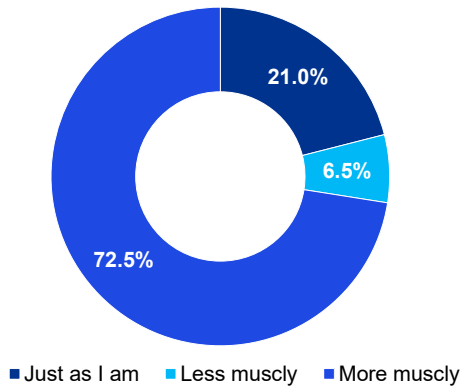
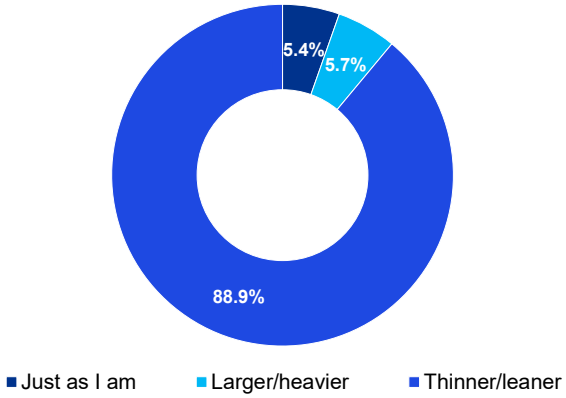


Figure B.5: Desire for thinness/leanness given body dissatisfaction

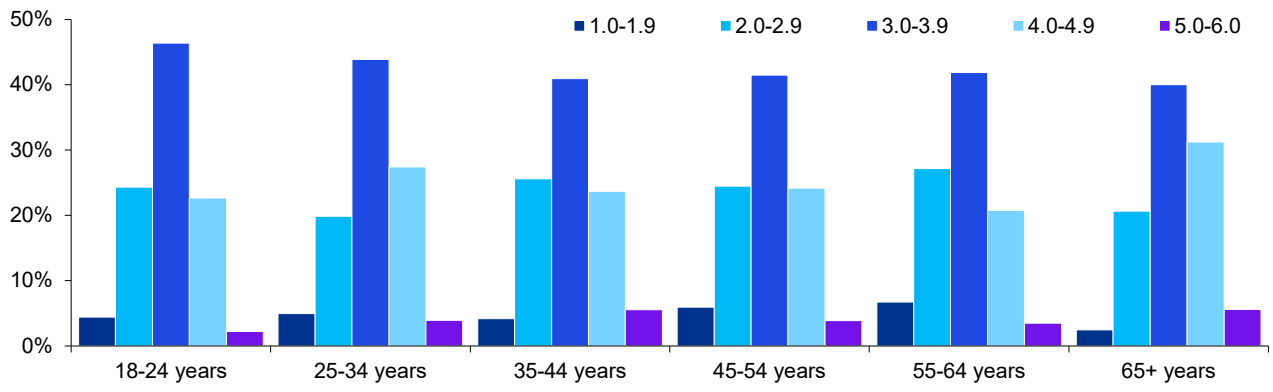


Source: KPMG analysis

Body Appreciation

Body Appreciation was measured using the 10-item Body Appreciation Scale-2. Respondents were asked to indicate how frequently each statement was true for them, using a 5-point scale ranging from never (1) to always (5). Scores were averaged across responses with higher scores indicating higher levels of body appreciation (i.e. more positive body image). For those who responded to this scale, the mean score was 3.5, indicating the sample on average reported feeling ‘Sometimes’ to ‘Often’ positive about their bodies.

Figure B.6: BAS-2 average score, by age



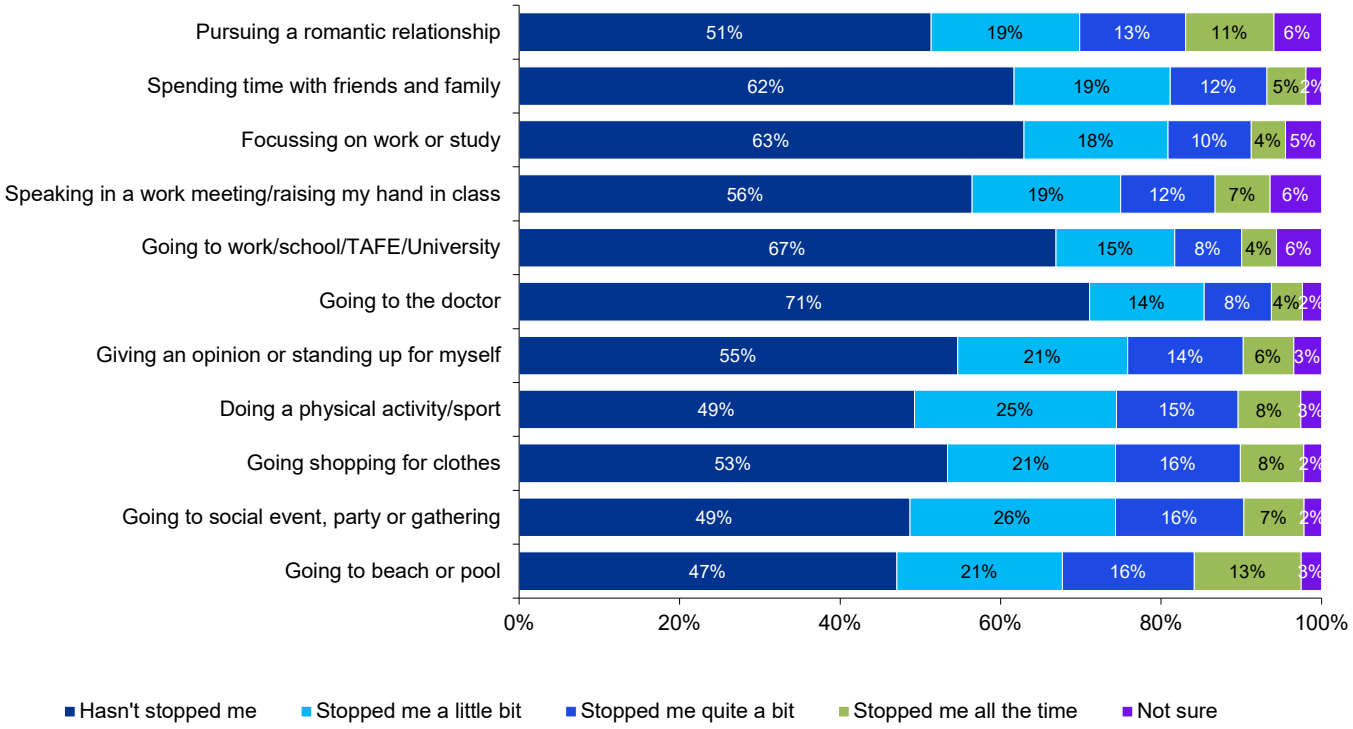
Source: KPMG analysis

B: Appearance Ideals Survey outputs

Levels of disengagement

Respondents completed a modified version of the Body Image Life Disengagement Questionnaire (BILD; Atkinsons & Diedrichs, 2021)[134] and were asked if feelings about how their body looks has ever stopped them from doing 10 different life activities using a 4-point scale ranging from 'hasn't stopped me' (1) to 'stopped me all the time' (4). Respondents were also given the option to respond 'not sure'. Analysis revealed that negative feelings about body image often prevent individuals from participating in various activities. Notably, there was a high level of disengagement from activities such as going to the beach or pool, pursuing romantic relationships, and shopping for clothes.

Figure B.7 Level of disengagement from life activities



Source: KPMG analysis

B: Appearance Ideals Survey outputs

Appearance-based discrimination

Analysis of appearance-based discrimination data shows variations across contexts. Individuals engaged in training or education reported discrimination rates of 20.3% compared to 9.3% for non-engaged individuals. In workforce settings, participating individuals experience discrimination at 14.8% versus 8.08% for non-participants. Educational environments demonstrate the largest differential at 11.0%, while workforce participation shows a 6.7% difference.

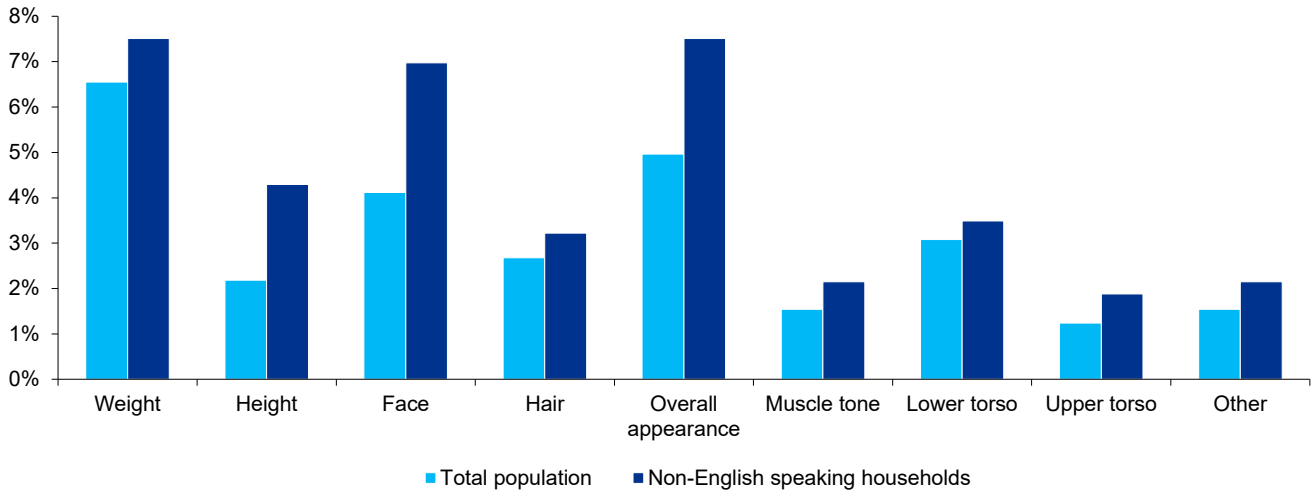
Table B.3. Prevalence of appearance-based discrimination by training/education and workforce participation

	Yes	No
Engaged in education or training	20.3%	9.3%
Participating in the workforce	14.8%	8.1%

Source: KPMG analysis

Individuals from non-English speaking households report higher levels of appearance-based discrimination compared to the general population across various measured features. In both groups, weight emerges as the primary basis for discrimination, with 7.5% of individuals from non-English speaking households and 6.5% from the general population citing it as the main factor.

Figure B.8. Appearance-based discrimination prevalence, by feature and the individual comes from a non-English-speaking household.



Source: KPMG analysis

B: Appearance Ideals Survey outputs

Spending on appearance

The survey analysis revealed that individuals experiencing body dissatisfaction and appearance-based discrimination spend money on appearance-altering products and services each month. Among respondents who reported expenditures in one or more categories, the mean and median spending per category are summarised in the table below (excluding outliers). The "Surgical Procedures" category recorded the highest average mean expenditure, while the "Other" category had the highest median spend, covering items such as hair care, waxing, lashes, nails, and clothing. As noted, there is considerable range in monthly expenditure across survey participants, particularly in relation to surgical procedures.

Table B.4 Average spending on appearance-altering products and services each month, by category

Product/Service	Mean spend per month ($)	Median spend per month ($)	Number of people	Range ($)
Diet products/services; exercise products/services	111	80	134	0-1700
Cosmetic procedures	187	100	53	0-6000
Skincare	70	50	183	0-2000
Make-up	60	50	134	0-1000
Surgical procedures	734	100	27	0-9000
Other	189	125	25	0-9000

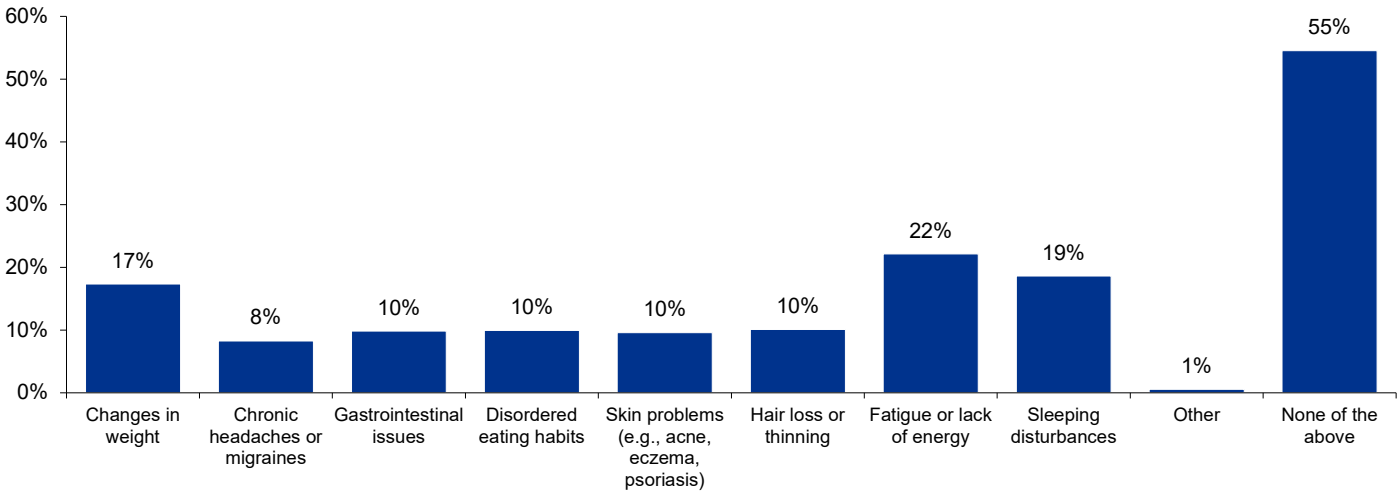
Source: KPMG analysis

B: Appearance Ideals Survey outputs

Conditions related to appearance ideals

For respondents indicating they had experienced body dissatisfaction or appearance-based discrimination, the survey asked whether they perceived these to have contributed to physical health conditions. The responses, detailed in Figure B.9 below, reveal that fatigue or lack of energy was the most frequently reported issue, followed by sleep disturbances (18%) and weight changes (17%).

Figure B.9 Physical conditions believed to be related to body dissatisfaction or appearance-based discrimination



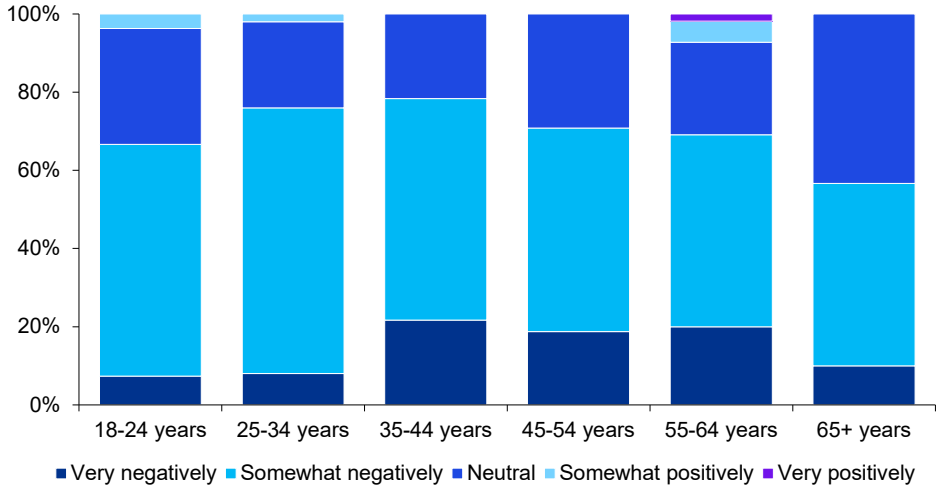
Source: KPMG analysis

B: Appearance Ideals Survey outputs

Feelings about appearance impact on daily life

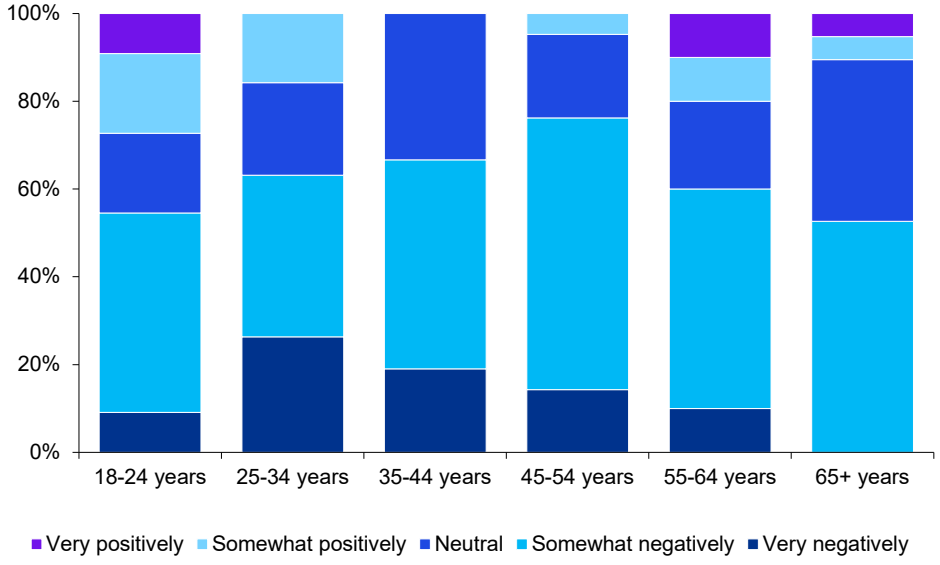
For respondents who reported experiencing body dissatisfaction, the survey inquired about how their feelings regarding their appearance impacted their daily life, including aspects such as physical health, emotional wellbeing, social interactions, and living environment. The results showed that women in the 35-44 age group were most affected, with 78% indicating that body dissatisfaction had a "very negative" or "somewhat negative" impact on their lives. For men, the most significant negative effects were observed in those aged 45-54, with 76% reporting similar outcomes.

Figure B.10. Feelings about appearance impact on daily life for females, by age.



Source: KPMG analysis

Figure B.11. Feelings about appearance impact on daily life for males, by age.



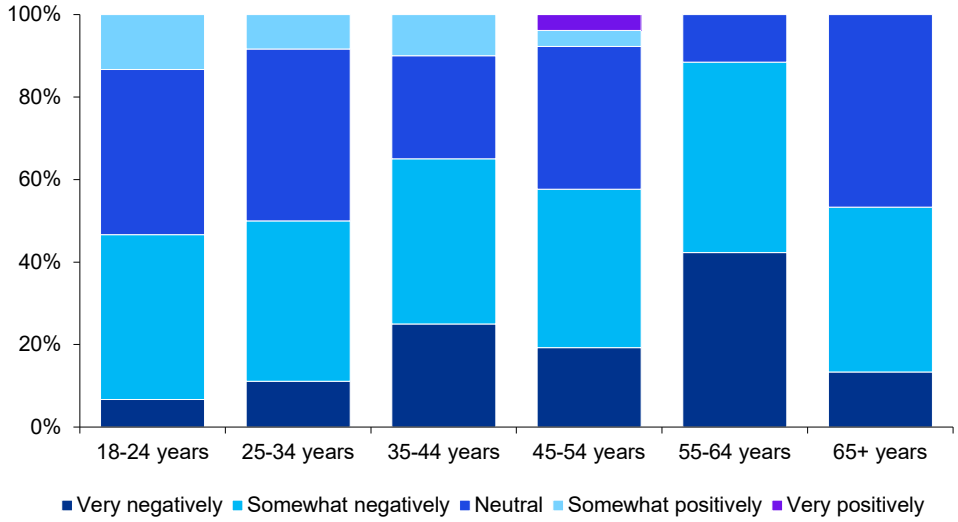
Source: KPMG analysis

B: Appearance Ideals Survey outputs

Appearance-based discrimination impact on daily life

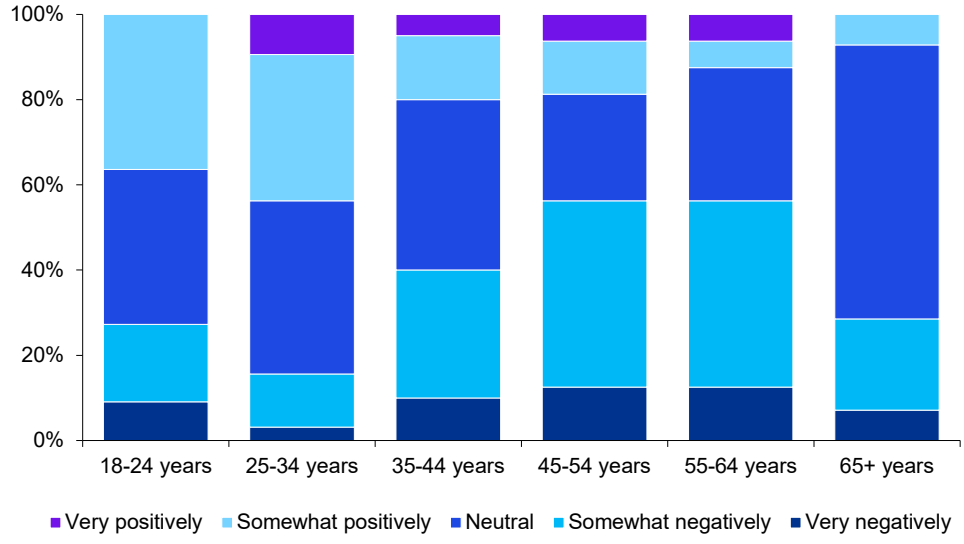
For respondents who reported experiencing appearance-based discrimination, the survey asked how these experiences affected their daily lives, considering factors such as physical health, emotional wellbeing, social interactions, and living environment. The results revealed that women in the 55-64+ age group were most affected, with 42% indicating that it had a "very negative" impact on their lives. In contrast, only 7% of those aged 18-24 reported a "very negative" impact. For men, the most significant negative effects were observed in those aged 45-64 years.

Figure B.12. Appearance-based discrimination impact on daily life for females, by age.



Source: KPMG analysis

Figure B.13. Appearance-based discrimination impact on daily life for males, by age.



Source: KPMG analysis

B: Appearance Ideals Survey outputs

Out of those who responded to having body dissatisfaction or appearance-based discrimination, respondents were asked if they sought help to manage their feelings:

- **21.3%** of females sought help to manage their feelings
- **26.6%** of males sought help to manage their feelings

Of those that said they had sought help; Table B.5 outlines the services and frequency of services. Lifeline is frequently used more than 10 times (15 responses), followed by the General Practitioner (9 times).

Table B.5. Services used and frequency of services by respondents to manage their feelings, by number of respondents

Service	1-2 times	3-5 times	6-10 times	More than 10 times
General Practitioner	27	22	8	9
Hospital	25	14	5	1
Lifeline	32	23	10	15
Psychologist	24	16	4	6
Psychiatrist	35	17	4	4
Dietician	26	20	6	6
Allied Health Practitioner	8	7	7	2
Peer Support Worker	17	7	5	1
Butterly Helpline/Support/ Program	37	33	15	5
Other	7	3	2	2

Source: KPMG analysis

C: Costing approach and key assumptions

This sections presents further information on the approach taken to estimate the economic and social costs and body dissatisfaction and weight-based discrimination to the Australian economy each year and highlights key assumptions.

Health system

Table C.1: Health system costs

Impacts	Details
For body dissatisfaction: alcohol use disorder, anxiety, depression, substance abuse disorders, eating disorders, suicide attempts & self harm **For weight discrimination:** alcohol use disorders, anxiety, depression, substance use disorder	Estimates for direct health system costs in Australia were derived from the AIHW FY18-19 disease expenditure data (see Table C.2 below). Costs were apportioned based on the number of cases attributable to body dissatisfaction or weight-based discrimination. Although more recent data (FY19-20) is available, FY18-19 was chosen to avoid distortions in utilisation caused by COVID-19. Since AIHW's expenditure estimates by disease account for only 73% of total recurrent health expenditure (referred to as allocated expenditure), the costs were scaled up to include unallocated expenditure using the factor (1/0.73)-1. To align with the target year of this report (2024), health system costs were adjusted for inflation. Prices have increased by approximately 13% since FY18-19.

Source: KPMG analysis

Table C.2: Health system costs

Condition	Total (FY18-19) - AIHW	Indexed to FY22-23	Attributable proportions - Body dissatisfaction	Cost - Body dissatisfaction	Attributable proportions – Weight discrimination	Cost - Weight discrimination
Alcohol use disorders	$495 million	$560 million	10%	$55 million	4%	$23 million
Anxiety	$1,798 million	$2,031 million	9%	$191 million	6%	$128 million
Depression	$2,112 million	$2,385 million	13%	$309 million	4%	$104 million
Drug use disorders	$637 million	$720 million	10%	$71 million	8%	$54 million
Eating disorders	$134 million	$152 million	19%	$30 million	6%	$8 million
Suicide attempts & self harm	$240 million	$271 million	11%	$73 million	-	-
Sub-total	-	-		**$686 million**		**$319 million**
Unallocated expenditure	-	-		**$630 million**		**$118 million**
Total	-	-		**$1,316 million**		**$437 million**

Source: KPMG analysis

C: Costing approach and key assumptions

Productivity costs

Table C.3: Productivity costs

Cost	Impacts	Details

Absenteeism	**For body dissatisfaction:** anxiety, depression, eating disorders, substance abuse disorders and suicide attempts.
	
	For weight discrimination: anxiety, depression, eating disorders and substance abuse disorders.
		Costs were estimated by multiplying employment-to-population ratios with the proportion of each condition attributable to body dissatisfaction and weight-based discrimination. An average hourly wage of $44 was applied (ABS, 2023)[136]. **Note:** For eating disorders, unit cost was calculated based on the proportion attributable to body dissatisfaction and weight-based discrimination.
		
		Condition-specific absenteeism estimates:
		• Depression, anxiety, and substance abuse: 48 hours was attributed to moderate mental health conditions (PwC, 2014)[137].
		• Eating Disorders: The estimated unit cost was $2,003 per individual per year for absenteeism (Deloitte, 2023)[138].
		• Suicide Attempts: Absenteeism was divided into two categories:
		  • Short-term absence: 7.5 hours (Doran et al, 2015)[139]
		  • Full incapacity: 97.5 hours (Doran et al, 2015)[139]

Presenteeism	**For body dissatisfaction:** anxiety, depression, eating disorders, and substance abuse disorders **For weight discrimination:** anxiety, depression, eating disorders and substance abuse disorders.	Presenteeism costs were calculated by multiplying employment-to-population ratios by the proportion of impacts attributable to body dissatisfaction and weight-based discrimination. An average hourly wage of $44 was applied (ABS, 2023). **Note:** For eating weight-based the unit cost was calculated based on the proportion attributable to body dissatisfaction and weight-based discrimination. Condition-specific presenteeism estimates: • Depression, anxiety, and substance abuse: 20 hours of presenteeism were attributed to moderate mental health conditions (PwC, 2014)[140]. • Eating Disorders**:** The unit cost was estimated at $6,140 per individual (Deloitte, 2023)[141].

Source: KPMG analysis

C: Costing approach and key assumptions

Productivity costs

Table C.3: Productivity costs

Cost	Conditions	Details
Informal care	**For body dissatisfaction:** anxiety, depression, eating disorders and suicide attempts. **For weight discrimination:** anxiety, depression and eating disorders	Informal care costs were calculated using an opportunity cost approach. The proportion of people receiving support from a caregiver for each attributable condition was multiplied by the number of hours of care provided, multiplied by the cost of a carer. • Proportion of people requiring care: 19% based on AIHW estimates of those experiencing severe mental illness. • Hours of informal care: 22.77 hours, based on averages from the Survey of Disability, Ageing and Carers (2022)[142]. • Replacement cost of informal care: The average hourly cost of employing a formal carer, including all relevant loadings was estimated at $36.12 (Deloitte Access Economics, 2020)[143]. This cost was adjusted for inflation.
Loss of lifetime earnings	**For body dissatisfaction:** anxiety, depression and eating disorders **For weight discrimination:** anxiety, depression and eating disorders	To estimate the loss of lifetime earnings, the number of deaths associated with each condition and attributed to body dissatisfaction or weight-based discrimination was multiplied by the years of working life and earnings lost . This was calculated by assuming a retirement age of 64 and subtracting the average age of death. For depression and anxiety, the number of suicides (795 females and 2,419 males) was proportioned based on the respective conditions' contribution to suicides (ABS, 2023)[144]. The years of working life lost were then calculated by subtracting the average age of death (46 years) from the retirement age of 64 • Depression: 35% of suicides (ABS, 2023)[144] • Anxiety: 19% of suicides (ABS, 2023)[144] For eating disorders there were 1,273 deaths associated with this condition (Deloitte, 2023)[145], with an average age of death of 41.3 years (Gaudini et al., 2022)[146]. The number of deaths from eating disorders was proportioned based on the cases attributed to body dissatisfaction or appearance-based discrimination. Loss of lifetime earnings were calculated by applying the average weekly earnings of $1,555, multiplied by 52 weeks, and discounting future years at a rate of 5%.

Source: KPMG analysis

C: Costing approach and key assumptions

Productivity costs

Table C.3: Productivity costs

Cost	Conditions	Details
Reduced employment	**For body dissatisfaction:** anxiety, depression, eating disorders and suicide attempts. **For weight discrimination:** anxiety, depression, eating disorders and direct weight discrimination	The reduced employment figures were derived from the literature as follows: • Depression: 17% (Luciano & Meara, 2014)[147] • Anxiety: 17% (Luciano & Meara, 2014)[147] • Eating disorders: 17% (Luciano & Meara, 2014)[147] • Suicide attempts: 4% (Various sources – Spiller et al., 2020[148]; Martin et al., 2005[149]), based on the proportion of individuals who are severely incapacitated or experience long-term disability following a suicide attempt. These figures were then multiplied by the employment-to-population ratio for 15-64 year olds and the average weekly earnings of $1,888.88 (annualised). For direct weight discrimination, a significant reduction in employment was observed for women with a BMI over 30, leading to a 25% decrease in employment (Sari & Osman, 2018)[150]. This reduction was applied to females in the 15-64 age range in the same manner.

Source: KPMG analysis

C: Costing approach and key assumptions

Efficiency costs

Table C.4: Efficiency costs

Cost	Conditions	Details
Consumer Tax	**Body dissatisfaction**: Anxiety, depression, eating disorders, substance disorders, suicide attempts **Weight-based discrimination:** anxiety, alcohol use, depression, drug use, direct weight discrimination	This was calculated by summing the costs of reduced employment and absenteeism due to body dissatisfaction and weight-based discrimination (as estimated under productivity costs). These figures were then multiplied by the average personal income tax rate, 25% (OECD, 2023)[151], and further adjusted for the efficiency loss in income tax, 25% (Cao et al., 2015)[152].
Business Tax	**Body dissatisfaction**: Anxiety, depression, eating disorders, substance disorders, suicide attempts. **Weight-based discrimination:** anxiety, alcohol use, depression, drug use, direct weight discrimination	This was calculated by adding absenteeism, presenteeism, and informal care costs for each impact. The total of these was then multiplied by the company tax rate, 29% (ATO, 2024)[153] and adjusted for the efficiency loss of company tax, 50.7% (Cao et al., 2015).[154]

Source: KPMG analysis

C: Costing approach and key assumptions

Wellbeing costs

Table C.5: Wellbeing costs

Cost	Conditions	Details

Wellbeing	**Body dissatisfaction: All impacts**
	
	Weight-based discrimination: All impacts
		The loss of wellbeing associated with impacts attributable to body dissatisfaction and weight-based discrimination was estimated using the following approach:
		• Calculation of DALYs (Disability-Adjusted Life Years): DALYs equal the sum of:
		  • Years of Life Lived with Disability (YLD), and
		  • Years of Life Lost (YLL).
		These DALY values were obtained from the AIHW, contained in Table C6 below for each relevant impact on Australia's total population. The values were then apportioned using the population attributable fractions linked to body dissatisfaction and weight-based discrimination.
		The total loss of wellbeing was calculated by multiplying the DALYs by the value of a statistical life year (VSLY), $235,000 (Office of Impact Analysis, 2023).[155]

Source: KPMG analysis

Table C.6: Australian Burden of Disease Wellbeing Costs (AIHW, 2023)

Reduced wellbeing	Total YLL (For Persons in Australia)	Total YLD (For Persons in Australia)	Total DALYS (for Persons in Australia)
Depressive disorders	435	166,736	167,171
Anxiety disorders	167	219,469	219,636
Alcohol use disorders	8,372	52,857	61,229
Drug use disorders	1,236	50,117	51,353
Suicide and self-inflicted injuries	154,527	1,212	155,739
Eating disorders	613	54,071	54,684
Tobacco use	315,668	115,234	430,902
Overweight (including obesity)	227,660	192,195	419,855

Source: KPMG analysis

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