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Healthy, Wealthy, and Wise? Exploring Parent Comparative Optimism About Future Child Outcomes

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Abstract
Objectives. Comparative optimism is present in parental predictions of their child's long-term, obesity-related health outcomes and some of this optimism is unrealistic. An understanding of how comparative optimism relates to parents' predictions of health versus other child outcomes could contribute to the development of interventions and strategies pediatricians can use to improve risk assessment. **Methods.** In a nationally representative survey, we asked American parents of 6- to 17-year-old children ($n = 410$) to estimate the chances that their child and "a typical child in their community" would be affected by overweight, get married, and complete a 4-year college degree by age 30, and the child's future salary at age 30. We collected data on family demographic and health characteristics. We modeled the difference in parent predictions for their child versus the typical child using multivariate linear regressions. **Results.** Compared to the typical child, parents were less likely to predict that their child would be affected by overweight (-26.6 percentage points, 95% confidence interval [CI]: $-35.6, -17.7$) and more likely to predict that their child would complete a 4-year degree (16.7 percentage points, 95% CI: 2.5, 31.0). Parents predicted their child would have a higher income than the typical child at age 30 ($15,266, 95% CI: $7,487, $23,046). Parents did not predict that their child would be more likely than the typical child to be married by age 30 (-2.2 percentage points, 95% CI: $-8.1, 3.7$). **Conclusions.** Some parents appear to exhibit comparative optimism around their child's future weight status, education, and economic outcomes, but not marriage. Future experimental work should assess whether risk communication approaches that consider optimism bias influence parent risk perception and parenting behaviors.

Keywords
child development, marriage, optimism, parents, pediatric obesity

Parents are investors in the human and health capital of their children.[1-3] Parents who invest in their child (i.e., enroll them in good schools, read to them, and serve healthy foods) may feel optimistic about their investments yielding positive socioeconomic gains. Alternatively, from an economic perspective, individuals tend to invest in enterprises that are likely to be successful or yield positive returns. One could therefore infer that parents who feel optimistic about their child's future outcomes are willing to invest in their child. Consequently, optimism could be protective and can facilitate parent engagement in behaviors to support child development.[4] Some forms of optimism are known

to be adaptive.[5,6] On the other hand, an unrealistically optimistic stance may make parents complacent, leading them to inadequately work toward ensuring desired future child outcomes.[7,8]

Having overweight or obesity is associated with poor health and socioeconomic outcomes.[9] Most parents are not concerned about their child's current or future

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weight.[10] We found that comparative optimism, defined as when "people believe that negative events are less likely to happen to them than to others and positive events are more likely to happen to them than to others,"[5,11,12] was observed in parents' predictions for their child being affected by overweight and developing an obesity-related comorbidity in adulthood.[13] However, logically, no more than 50% of parents can experience better than average (community) outcomes, meaning that some parents are unrealistically optimistic about their child' future obesity-related outcomes.[5] Potential approaches to address or capitalize on unrealistic obesity-related optimism have been proposed, including reframing risk communication messages and focusing risk communication on health (e.g., cardiovascular disease risk) rather than weight, since there is evidence that parents of children with obesity have conflicting expectations around future obesity and obesity-related comorbidities.[13–15]

Unrealistic parental optimism may not be easily modified or circumvented; optimists tend to remain firm in their beliefs despite evidence that they should not.[5,16,17] Being optimistic about a child's future may cut across numerous aspects of their children's lives. A better understanding of whether and how comparative optimism differentially relates to parents' predictions of health versus nonhealth outcomes could contribute to the development of interventions and strategies practitioners can use to improve parental risk perception for obesity-related health outcomes and to encourage reductions in obesogenic behaviors. We sought to examine comparative optimism around four outcomes: being

affected by overweight, marriage, college graduation, and salary.

Methods

Study Population

We fielded a survey in May 2016 using the AmeriSpeak consumer panel, a probability-based panel designed to be representative of the population of civilian, noninstitutionalized US adults. Details on panel characteristics and recruitment are published elsewhere.[18] For the present study, AmeriSpeak randomly sampled English-speaking parents of 6- to 17-year-old children to complete the survey. We sampled parents of children as young as 6 years to capture a time period that is predictive of future weight.[19,20] Panel participants received a small incentive payment (<$5) from AmeriSpeak for completing the survey.

Survey

Parents were invited to complete a 10-minute survey. If a parent had more than one 6- to 17-year-old child, one child was randomly selected to be the focus of the survey. Screening questions asked parents to report their height and weight, and their child's height, weight, and birthdate.

Survey Measures

Main Outcomes. To measure comparative optimism, parents were asked to make predictions about future outcomes for both their child and a typical child in their community.[21,22] The primary outcomes were the difference in parent predictions for their child compared to the typical child in their community of the probability of being affected by overweight, marriage, and completion of a 4-year college degree by age 30 and of salary at age 30. Predictions were measured on a scale from 0% to 100% (for probabilities) and "0" to "$100,000 or more" (for salary) (Figure 1). Parents were provided with information on what income percentile corresponded with the chosen annual salary.[23] The order in which parents saw the block of questions about their child or a typical child in the community was randomized.

Demographics and Health Characteristics. In addition to screening questions, parents reported whether they perceived their child, themselves, or their child's other parent to be underweight, about the right weight, or overweight.
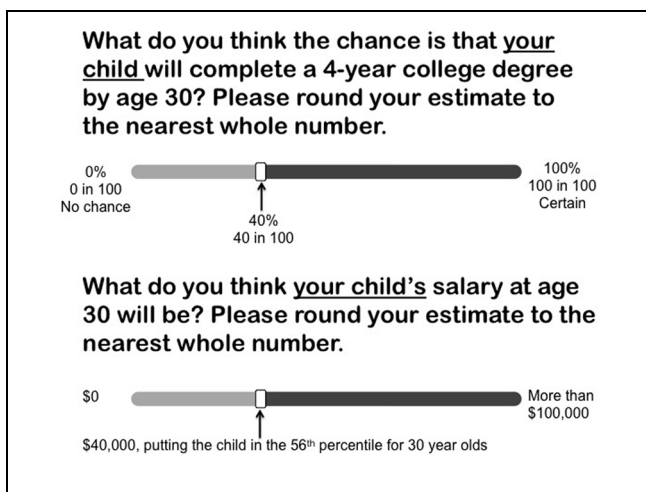
Figure 1 Visual analog scale.
Parents were asked, "What do you think the chance is that [YOUR CHILD OR A TYPICAL CHILD IN YOUR COMMUNITY] will [OUTCOME] at age 30 for each of the following outcomes: being overweight, completing a 4-year college degree, and being married. For the outcome of salary, parents were given data on the percentile of income as a reference. The scale reported numbers in terms of percentages and proportions, and parents were able to see exactly what number they had chosen using the slider in the box underneath the scale.

Data on demographics (e.g., race/ethnicity, gender) were obtained from previously collected AmeriSpeak panel data. Last, respondents reported the highest level of education that their child's other parent achieved, if known.

Numeracy. Parents were asked a series of three validated questions to assess their understanding of frequency, probability, and percentages, as numeracy can affect individual's perception of risk.[24,25]

Statistical Analyses

Parents and children were classified as healthy (i.e., normal) weight, being affected by overweight, or being affected by obesity using the zanthro package in Stata[26] and in accordance with the Centers for Disease Control and Prevention guidelines.[27,28]

We calculated the sample mean parent-predicted chances that respondents' own children and typical children would meet each outcome. Because future salary was winsorized at "more than $100,000," we assigned a value of $120,009, the median salary above $100,000 for 30 year olds, to that level.[23]

We subtracted the parent-estimated probability that the typical child would experience an event from the parent-estimated probability that their child would experience an event to generate a difference score for each of the four outcomes: overweight, college graduation, marriage, and salary at age 30. We modeled the difference scores using a separate linear regression for each difference score. If, on average, there is no difference in parent predictions between their child and the typical child, parents are not comparatively optimistic or comparatively pessimistic at the population level. If, however, at a population level, the mean difference between parent predictions for their child and the typical child is significantly greater than zero, then parents are comparatively optimistic. Negative values suggested parents predicted their children would be less likely than the typical child to experience that outcome, whereas positive values suggested parents predicted their children would be more likely to experience that outcome. Model covariates, including demographic and health characteristics (Table 1), were included in a multivariable model if they met an $\alpha = 0.05$ inclusion cutoff in univariate analyses. Variance inflation factors were used to assess collinearity in multivariable regression coefficients. An a priori $\alpha = 0.05$ was used to assess statistical significance and 95% confidence intervals are reported. Stata (version 14) was employed for all analyses.[29] The survey package was used to adjust for the AmeriSpeak probability-based sample design. The margins command was used to estimate outcomes and 95% confidence intervals for specific subgroups.[29] The study was approved by the University of Washington Institutional Review Board. The funding agreement ensured the authors' independence in designing the study, interpreting the data, writing, and publishing the report.

Results

Screening was completed by 526 AmeriSpeak panelists. Of those, 452 (85.9%) met the eligibility criteria, and 410 completed surveys (77.9% of those screened). The sample was racially/ethnically diverse, with respondents being 57.5% non-Hispanic White, 11.3% non-Hispanic Black, 22.4% Hispanic, 4.4% Asian or Pacific Islander, and 4.5% other or mixed race. Weight status in the sample was nationally representative; 33% of 6- to 17-year-old children and 65% of parents were affected by overweight or obesity compared to national estimates of 32% and 69%, respectively, for similarly aged groups.[30] Parents' self-assessed weight status was aligned with parent weight status calculated using parent-reported height

Table 1 Population Demographic and Health Characteristics[a]

Characteristics	Survey; Percentage/Mean (SE)
Demographic characteristics	
Female parent (%)	55.5
Female child (%)	52.6
Parent age (years), mean	
<40	44.5
≥40	55.5
Child age (years), mean	
6–12	52.8
13–17	47.2
Parent race/ethnicity (%)	
White, non-Hispanic	57.5
Black, non-Hispanic	11.3
Hispanic	22.4
Other[b]	8.9
Child race/ethnicity (%)	
White, non-Hispanic	58.5
Black, non-Hispanic	13.9
Hispanic	15.6
Other[b]	11.9
Region (%)	
Northeast	16.7
Midwest	20.8
South	37.7
West	24.8
Income (%)	
<$30,000	23.7
$30,000–$74,000	32.7
$74,000–$124,000	27.5
≥$125,000	16.0
Highest level of parent education[c] (%)	
High school or less	21.0
Some college	37.1
Bachelor's degree or higher	41.9
Married	69.9
Numeracy[d]	1.5 (1.0)
Health characteristics	
Parent BMI class[e] (%)	
Healthy weight	35.4
Overweight	28.2
Obese	36.4
Child BMI class[e] (%)	
Healthy weight	67.3
Overweight	19.1
Obese	13.6
Parent perception of current child as overweight (%)	11.2
Parent perception of self as overweight (%)	60.7
Parent perception of child's other parent as overweight (%)	43.1

BMI, body mass index.
[a]All percentages represent weighted estimates.
[b]Other category includes respondents who indicated that they were of two or more races, Asian, Native Hawaiian/Pacific Islander, American Indian/Alaska Native.
[c]Highest level of education of the child's two parents.
[d]Number of correct questions (0 to 3) to three standard numeracy questions.[24]
[e]For adults, healthy weight represents a BMI < 25 kg/m^2; overweight represents a BMI ≥ 25 kg/m^2 and <30 kg/m^2; and obese represents a BMI ≥ 30 kg/m^2. For children, healthy weight represents a BMI $<$ 85th percentile for age and sex; overweight represents a BMI $\geq$ 85th percentile and $<$95th percentile; and obese represents a BMI $\geq$ 95th percentile.
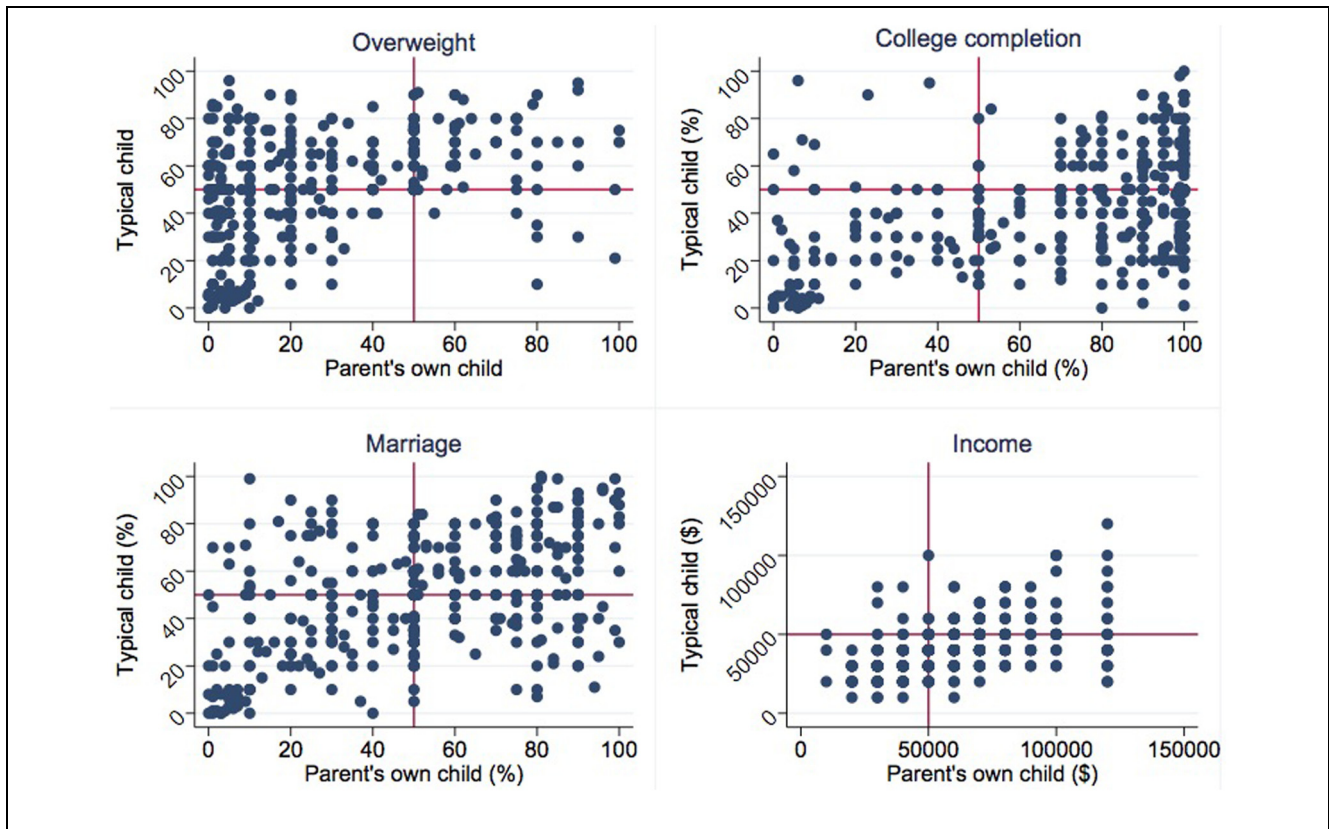
Figure 2 Parent-predicted chance that their own child and typical will experience outcome.
Note: Estimates presented in figure are unadjusted for covariates and survey weights.

and weight, with 60.7% of parents perceiving themselves to be affected by overweight, but only 11.2% of parents perceiving their children to be affected by overweight. Among other sample demographics, 23.7% had a household income below $30,000, 41.9% of children had a parent who had completed a bachelor's degree, and 69.9% of respondents were currently married. On average, parents answered 1.5 numeracy questions correct (Table 1). Numeracy in our sample was comparable to that in other samples; approximately 24% of respondents answered all three numeracy questions correctly compared to 16% to 38% in other adult samples.[31]

Unadjusted for covariates, parents predicted their own child at age 30 to have a mean 23.6% (95% confidence interval [CI]: 20.6, 26.6) chance of being affected by overweight, a 66.6% (95% CI: 61.9%, 71.2%) chance of completing a 4-year college degree, a 51.3% (95% CI: 47.2%, 55.4%) chance of being married at age 30, and a salary around $58,742 (95% CI: $55,486, $61,998) at age 30, putting their salary around the 77th percentile for 30 year olds. Parents predicted the typical child in the

community would have a mean 47.9% (95.5% CI: 44.8%, 50.9%) chance of being affected by overweight, a 40.7% (95% CI: 37.7%, 43.6%) chance of completing a 4-year college degree, and a 50.4% (95% CI: 47.0%, 53.7%) chance of being married, and a salary around $40,358 (95% CI: $38,301, $42,415) at age 30, at the 58th percentile for 30 year olds.

Plots of the unweighted, unadjusted relationship between parents' predictions for their own child and the typical child can be seen in Figure 2. Parent predictions for the typical child are displayed on the *y*-axis and parent predictions for their own child are displayed on the *x*-axis. If there was no systematic comparative optimism (or pessimism) at the population level, predictions for the parents' own child and the typical would be scattered evenly throughout the plot, suggesting neither consistent comparative optimism nor pessimism. If parent predictions for their own child and the typical child were similar, predictions would be clustered in the bottom left- and top right-hand quadrants of the plot. If parent predictions for their own child and the typical child were

different, predictions would be clustered in the top left- and bottom right-hand quadrants of the plots, with parents estimating high probabilities for the typical child and low probabilities for their own child, or vice versa.

For the negatively framed outcome of being affected by overweight, most parents who estimated their child would have an above-average probability of overweight in adulthood also estimated the typical child to have an above-average probability of overweight in adulthood. Few parents estimated that their child would have a high probability of being overweight in adulthood and that the typical child would have a low probability of being overweight in adulthood (lower right quadrant). The predictions are clustered in the other three quadrants of the figure, suggesting some bias in predictions.

For the positively framed outcomes of college prediction and for salary, few parents estimated their child to have a low probability of achieving the outcomes while also estimating the typical child would have a high probability of achieving the outcomes, again suggesting bias in predictions. Predictions for the marriage outcome are evenly scattered throughout the plot.

Adjusted estimates of comparative optimism are presented in Table 2. The table includes only variables that were included in the multivariate model using our covariate selection approach. No covariates were removed from the model due to collinearity. Other covariates considered for inclusion but not listed in the table include parent body mass index (BMI) class, household income, parent gender, child gender, child age, census region, and residence in a metropolitan statistical area.

With covariate adjustment, parents predicted their child's chances of being affected by overweight at age 30 to be 26.6 percentage points lower than a typical child's chances (95% CI: −35.6, −17.7). Parents were less optimistic about their child's future weight status if the parent perceived their child or themselves to be overweight. Parents who perceived their child to be overweight estimated their child's chances of being affected by overweight at age 30 to be 2.9 percentage points lower than a typical child's chances (95% CI: −13.6, 7.9), whereas parents who did not perceive their child to be overweight estimated their child's chances of being affected by overweight at age 30 to be 26.8 percentage points lower than a typical child's chances (95% CI: −30.2, −23.5). Parents who perceived themselves to be overweight estimated their child's chances of being affected by overweight at age 30 to be 21.7 percentage points lower than a typical child's chances (95% CI: −26.0, −17.3), whereas parents who did not perceive themselves to be overweight estimated their child's chances of being

affected by overweight at age 30 to be 27.9 percentage points lower than a typical child's chances (95% CI: −32.4, −23.5). However, neither the child's nor the parent's actual current weight status were significantly related to parent's comparative optimism around future child overweight. Interaction effects between actual child weight status and perceived child overweight status were nonsignificant (data not shown). Parents were more optimistic about their child's future weight status if the child's parents had completed at least some college.

Parents predicted that their child's chances of completing a 4-year college degree were 16.7 percentage points higher than a typical child's chances (95% CI: 2.5, 31.0). Parents were also more optimistic if one of their child's parents had completed college, if the child was Hispanic, and if the parent was older than 40. Southern parents were less optimistic about their child's future education relative to Northeastern parents.

Parent predictions were neither optimistic nor pessimistic about their child's future marital status relative to the typical child (−2.2 percentage points, 95% CI: −8.1, 3.7). Currently married parents were more likely to be optimistic about their own child's future marital status (8.6 percentage points, 95% CI: 1.6, 15.7). Parents who perceived the child's other parent to be overweight were pessimistic about their child's future marriage prospects (−7.3 percentage points, 95% CI: −13.8, −0.7).

Finally, parents were optimistic about their child's future salary, estimating their children would earn $15,266 more than the typical child at age 30 (95% CI: $7,487, $23,046). Parents' perception of themselves as having overweight or obesity was predictive of less comparative optimism for their child's future salary (−$7,498, 95% CI: −$13,316, −$1,681). Higher parent education was predictive of greater comparative optimism for their child's future salary ($9,683, 95% CI: $2,431, $16,934).

Discussion

We defined comparative optimism as a parent perceiving their own child's chances of experiencing positive outcomes as higher than the chances of a typical child in the community experiencing the same outcomes.[5,11] In this nationally representative sample, parents displayed comparative optimism about their child's future weight status, education, and salary expectations, but not marriage prospects, even after controlling for demographic and health characteristics. We discuss potential characteristics associated with comparative optimism and

Table 2 Model of the Difference Between Parent Predictions for Their Own Child and the Typical Child at Age 30

| | Parent Prediction of Child Outcome at Age 30 | | | | | | |
	Probability of Overweight (%)	95% CI	Probability of College Graduation (%)	95% CI	Probability of Marriage (%)	95% CI	Salary ($)	95% CI ($)
Adjusted difference (constant)	−26.6	[−35.6, −17.7]	16.7	[2.5, 31.0]	−2.2	[−8.1, 3.7]	15,266	[7,487, 23,046]
Child BMI class[a]								
Healthy weight	Ref						Ref	
Overweight	3.1	[−5.8, 11.9]	—	—	—	—	7,183	[−2,138, 16,504]
Obese	9.4	[−1.0, 19.9]	—	—	—	—	−2,902	[−9,029, 3,224]
Parent Perception of whether child is currently as overweight	24.0	[12.6, 35.3]	—	—	—	—	—	—
Parent perception of self as currently overweight	6.3	[0.0, 12.6]	—	—	—	—	−7,498	[−13,316, −1,681]
Parent perception of child's other parent as currently overweight	3.2	[−3.0, 9.4]	—	—	−7.3	[−13.8, −0.7]	—	—
Highest level of parent education								
High school or less	Ref		Ref		—	—	Ref	
Some college	−8.1	[−15.6, −0.5]	8.9	[−1.6, 19.3]	—	—	6,932	[−813, 14,676]
Bachelor's degree or higher	−10.8	[−19.0, −2.7]	15.6	[4.4, 26.9]	—	—	9,683	[2,431, 16,934]
Parent race/ethnicity								
White, non-Hispanic	Ref		Ref		—	—	—	—
Black, non-Hispanic	7.7	[−4.3, 19.7]	−6.2	[−25.7, 13.2]	—	—	—	—
Hispanic	4.7	[−4.3, 13.7]	−13.3	[−31.7, 5.1]	—	—	—	—
Other[b]	2.6	[−6.5, 11.7]	3.0	[−15, 21]	—	—	—	—
Child race/ethnicity								
White, non-Hispanic	—	—	Ref		—	—	—	—
Black, non-Hispanic	—	—	0.7	[−17.9, 19.4]	—	—	—	—
Hispanic	—	—	18.3	[0.2, 36.5]	—	—	—	—
Other[b]	—	—	6.2	[−12.6, 25]	—	—	—	—
Parent age								
≤40	—	—	Ref		—	—	—	—
>40	—	—	10.2	[1.7, 18.6]	—	—	—	—
Region								
Northeast	—	—	Ref		—	—	—	—
Midwest	—	—	−5.8	[−18.8, 7.3]	—	—	—	—
South	—	—	−13.3	[−25, −1.6]	—	—	—	—
West	—	—	−5.1	[−18.5, 8.2]	—	—	—	—
Marital status								
Not currently married	—	—	—	—	Ref		—	—
Married	—	—	—	—	8.6	[1.6, 15.7]	—	—
Numeracy[d]	−1.1	[−4.7, 2.5]	0.5	[−3.7, 4.7]	—	—	—	—

BMI, body mass index; Ref, reference category; —, variable not included in multivariate model. Covariates were selected for inclusion using a forward selection approach. Other covariates considered for inclusion but not listed include parent BMI class, household income, parent gender, child gender, child age, census region, and residence in a metropolitan statistical area.

[a]For children, healthy weight represents a BMI <85th percentile for age and sex; overweight represents a BMI ≥ 85th percentile and <95th percentile; and obese represents a BMI ≥ 95th percentile.

[b]Other category includes respondents who indicated that they were of two or more races, Asian, Native Hawaiian/Pacific Islander, American Indian/Alaska Native.

[c]Highest level of education of the child's two parents.

[d]Number of correct questions (0 to 3) to three standard numeracy questions.[24]

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consequences of optimism herein, along with areas for future research.

Parents' perception of their own overweight status was associated with comparative optimism about their child not being overweight in early adulthood, although parents who perceived themselves to be overweight still estimated their children's chances of being overweight to be significantly lower than that of the typical child, which may be unrealistic for some families. Parents who perceived their child as currently overweight were neither comparatively optimistic nor pessimistic about their child's future weight status, suggesting that weight-related comparative optimism is not universal across the spectrum of current child or parent weight. The child's and respondent's actual weight class were not related to comparative optimism—unsurprising as weight class is often misperceived.[15,32] Parents who perceived themselves to be overweight were less optimistic about their child's future salary. This can be partially explained by the fact that women with obesity face labor market discrimination that lead to lower earnings.[33] Surprisingly, household income was not independently predictive of comparative optimism around estimated future salary and was therefore not included in the multivariate model. This may be because the typical family in the community has a similar income profile as respondents' families. Although numeracy is associated with risk perception in general,[31] numeracy was not associated with comparative optimism in our analyses.

Although comparative optimism around marriage was associated with the parent's current marital status, parents were not comparatively optimistic about our marriage outcome. One reason for a lack of comparative optimism about marriage is that marriage at age 30 may be neither a positive nor negative outcome. Although the median age for marriage for both men and women is under 30, parents may want their children to get married after 30 in order to improve education and career prospects and reduce the risk of divorce.[34] Additionally, half of Americans believe society is just as well off if people have priorities other than marriage and children.[35] Another potential driver of a lack of comparative optimism around marriage is that parents may feel optimistic about outcomes that they can control or influence.[6,11,21,36] Given that there is no formal way for a parent to find a spouse for their child in the United States, parents may not display comparative optimism about marriage. Additionally, unlike our other outcomes, marriage requires two parties, thus potentially further reducing a parent's locus of control around marriage.

Relative to current figures, parents overestimated some probabilities for all children—even typical children—experiencing positive events at age 30. Nationally, only 40% of 20 to 39 year olds are at a healthy weight compared to present study estimates of 51.2% for the typical child and only 32% of adults 25 years or older have a bachelor's degree compared to parent estimates of 40.7% for the typical child.[30,37] Parents underestimated the probability that children would be married by age 30. Data from 2006 to 2010 suggest 68% of women and 56% of men were married by age 30 compared to present study parent estimates around 50%.[38] Parent estimates of the salary for a typical 30 year old were fairly accurate; the mean salary for 30 year olds is $38,523.[23]

Comparative optimism, even unrealistic optimism, is common and can be adaptive.[5,6] A comparatively optimistic outlook about a child's future can have positive consequences and be indicative of high efficacy for achieving goals. High adolescent and parent academic expectations are a strong predictor of child academic success.[39,40] And adolescents construct views of their future selves based on cues from their parents and society.[41] Last, parent hope may encourage parental investments in their child to help them attain better outcomes, such as participating in school busing programs to access more rigorous academic programs or enrolling a child in a tutoring program.

However, if individuals are unrealistically optimistic that they (or their children) will achieve positive and desired outcomes with little investment of effort or preparation, optimism could be detrimental. Parents may be unrealistically optimistic because they are unfamiliar with what is required to achieve a desired outcome. In one study, even parents with low parental educational attainment reported high educational expectations for their children.[42] Further investigation reveals that high expectations are associated with a lack of familiarity with what is required for a child to gain admission to college.[42] Anecdotally, we also see disparities between expectations and health status in the field of health. For example, parents may feel ready to engage in behavior change around healthy eating and physical activity, but likely underestimate the time and effort associated with changing their child's and their own eating and physical activity behaviors. Indeed, many of the most effective interventions for pediatric weight management have intensive contact expectations and encourage engagement in numerous skills to bring about change.[43]

We cannot know if parents are unrealistically optimistic at an individual level unless we can compare their self-assessed probability of experiencing events to an objective standard. This is one area for future research. Additionally, while there is research that unrealistic optimism may be associated with positive mental health,[6,36]

the relationship between unrealistic optimism and obesity-related health behaviors and outcomes is less clear. There is some research on adults' unrealistic optimism about their own health,[5,6,12] but these findings are often conducted in limited samples and may not necessarily translate to parent optimism about child health outcomes. Some research shows that individuals who have some mental health distress actually process information in a relatively balanced fashion, so there may be some benefit to pessimism and concern.[6] Although one study examines the association between maternal concern about child weight and maternal feeding practices, finding that concern rarely translated into healthier feeding practice.[44] The link between parent health expectations, the accuracy of expectations, and parent behaviors and/or knowledge of requirements or other predictors of achievement is an area that requires further study, especially in the field of obesity research.

When it comes to talking about future child outcomes, practitioners may need to strike a balance between encouraging parents' optimism while also supporting them in making the early investments to set their child up for success and take precautions against undesired outcomes. If unrealistic optimism is a driver of positive parental obesity-related behaviors, rather than argue against unrealistic parental optimism, which could be difficult to modify, one could capitalize on optimism and encourage preparation by framing desirable future outcomes as possible but also uncertain[16,45] in order to utilize optimism to help achieve a self-fulfilling prophecy.[17] A sense of both unrealistic optimism and control has been shown to be associated with higher motivation, greater persistence, and more effective performance.[6] Risk communication approaches should consider the way in which individuals manage negative feedback, being careful to frame feedback as positive, and making sure messages are not completely misaligned with prior beliefs in order to increase the chances of a health promotion message being accepted.[6]

Additionally, making it clear what actions parents can take to help their child's future may give parents agency and hope,[36] encouraging parents to make more concrete investments early on. Regarding obesity, this may mean showing parents the change in weight that would be expected from a daily decrease in caloric intake or other change in behavior, which is a feasible intervention strategy given new mathematical models of childhood energy balance.[46] Goal theory states, "Simply adopting a goal without knowing how one is doing . . . has no lasting motivational impact."[47(p128)] Families could visualize their progress toward reducing obesogenic behaviors

using validated process and outcome measures. This appears to happen routinely in children's education, as parents see their children's grades and families work with counselors to choose an educational track for their child as early as middle school.[48] In many health care encounters, child BMI charts show the child's past trajectory, but goal-setting discussions that show a child's potential future BMI and health trajectory may improve clinical discussions about weight.[14,15] If such a system were adopted for obesity counseling, care should be taken to ensure that such systems do not exacerbate disparities in goal-setting that are seen in education.[49] It could also be that more frequent perception and planning are needed than otherwise available through current preventive health care schedules.

In trying to encourage the adoption of healthful behaviors, health practitioners may encounter one problem observed in the field of education: the attitude–achievement paradox. In this paradox, socially disadvantaged youth believe that all people can be successful in the abstract, but that they themselves cannot achieve desired outcomes based on their lived experiences.[50] Developing culturally competent obesity intervention strategies may help boost self-efficacy and skills to avoid such a paradox and a widening of health disparities.

Limitations

This study had some limitations. The outcomes measured were not framed consistently; we asked parents about future child overweight (negative) and college completion (positive). This may have biased parent estimates. However, while outcomes should be framed consistently, there is no consensus as to whether or how desirability of outcomes influences optimism, although desirability bias can be reduced when using continuous likelihood judgments (as opposed to dichotomous predictions) as we did in the present study design.[51] We did not ask parents to differentiate between overweight and obesity. However, given that parents do not perceive a child as having obesity until the child is at the 99th percentile, using the term "overweight" with parents may better represent the clinical definition of obesity.[52] We were only able to survey one parent in two-parent households through AmeriSpeak. The child's other parent may have different expectations for their child's future. Although the web-based survey allowed us to collect data from a national sample, we were only able to collect parent-reported, not measured, height and weight. However, the distribution of overweight and obesity in the sample was nationally representative. Finally, the

survey was administered in English. Non–English-speaking households may have different expectations around the outcomes of interest. However, the sample was socioeconomically diverse.

Conclusions

Parents predicted their child would be more likely than a typical child to be at a healthy weight, complete college, and have a high salary at age 30. Future work should develop health risk communication approaches that consider unrealistic optimism and evaluate whether these approaches influence parent risk perception and parental practices around child feeding and physical activity behaviors.

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