Parents play a vital role in the development of a child’s physical activity (PA) behaviors. Research indicates parental encouragement is associated with increased PA later in life. However the role such encouragement plays in increasing PA levels may be influenced by the perception of barriers to PA and/or the confidence to overcome such barriers. **Purpose:** To explore if differences exist in the perceived barriers to PA in participants who did and did not receive encouragement to exercise from their parents while growing up. **Methods:** Data was collected from a convenience sample of 424 college students from a midsized university via an online survey measuring the expected benefits and barriers to PA. Students were asked if their parents encouraged them to exercise while growing up. **Results:** Participants whose parents did not encourage them to exercise found the following barriers significantly more inhibitive than those who did receive parental encouragement to exercise: ‘I’m too lazy’ \(t(1, 417)= -2.671; p=.008\), ‘exercise is boring’ \(t(1, 416)= -2.779; p=.006\), ‘I get too fatigued by exercise’ \(t(1, 417)= -3.485; p=.001\), ‘I have nobody to workout with’ \(t(1, 416)= -1.990; p=.047\), and ‘I do not know how to work out’ \(t(1, 416)= -4.833; p=.000\). **Conclusion:** Identifying correlates of PA is important in the prevention of overweight/obesity. Parental encouragement of PA in childhood may assist in the reduction of perceived barriers to PA later in an individual’s life. It may also build self-efficacy to overcome such barriers. Thus designing programs that (1) develop the “encouragement skills” of parents and (2) increase self-efficacy to overcome potential barriers to PA during both childhood and later in life may provide an unexplored avenue to combat overweight/obesity.