This study aims to demonstrate through structural equation modeling the influence of athletes' autonomy-supportive relationships on the positive affectivity and emotion regulation experienced during competitions along with the acquisition of personal resources as self-confidence and self-efficacy. To that end, 300 young athletes in training from different sports and that were competing, with ages from 11 to 18 years were selected. The results confirm that a supportive environment and, specifically, close relationships are fundamental for young athletes in training stages to acquire and reinforce personal resources that allow them to improve their performance. For that, athletes also have to manage properly their affective system during competition, which reinforces self-confidence and self-efficacy when facing sport challenges. Finally, the model did not show differences between initial and advanced categories. © 2018 Sociedad Revista de Psicología del Deporte. All rights reserved.