.This is largely due to the different types of ceramic materials, variability in prosthetic use, and printing parameters [4].Examples of polymers include polyether ether ketone (PEEK), polycaprolactone (PCL), polymethyl methacrylate (PMMA), polylactic acid (PLA), poly (lactic-co-glycolic acid) (PLGA), and ultraviolet (UV) resins.In a systematic review of in vitro studies, Valenti et al. [25] found that the mechanical properties of AM-printed polymeric materials were generally lower than those of materials produced by conventional methods.Wesemann et al. [26] investigated the wear resistance and mechanical properties of AM-printed occlusal appliances compared to the conventional injection molding method and found that there was a significant difference between their mechanical properties.The authors found that while their mechanical properties were satisfactory, improvements in 3D-printed metals and ceramic interfaces are required to match the precision obtained with conventional casting methods.Prpic' et al. [27] investigated the mechanical properties of AM-printed PMMA compared to conventional heat-polymerized and injection pressing PMMA, as used for denture bases.Ceramics Ceramic materials are considered a favorable material for dental restorations due to their excellent mechanical properties, biocompatibility, good abrasion and corrosion resistance, and esthetic properties.Dental Materials in 3D Print Technology Printable dental materials are rapidly advancing, with research focused on the development of additive manufacturing (AM) printing parameters to fine-tune the mechanical properties of conventionally used materials.A review by Revilla-Leon et al. [28] compared different printed alloys with conventional casting methods.4.4.1.4.2.4.3.

Summarized by © lakhasly.com