Tracking the Trajectory of Resident Learning Through the Lens of Self-Determination Theory.

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This retrospective mixed-methods study analyzes qualitative and quantitative data collected from 56 family medicine residents enrolled in our program in academic years 2009-2015. We seek to describe the trajectory of self-directed learning across the 3-year residency training period. Results of each data set will be compared side-by-side to determine whether the qualitative and quantitative data at specific training intervals illustrate similar patterns.

**QUALITATIVE ANALYSIS**
We explore the qualitative data on two levels of analysis – the aggregated cohort of residents enrolled from 2009 to 2015 and a case study of an individual learner.

- Aggregated Resident Data Set: Focus group transcripts from PGY-level cohorts at four intervals (after orientation to PGY1 and end of each of the 3 training years)
- Individual Learner Data Set: Transcripts of 7 RAFT meetings, 7 educational SOAP (Subjective, Objective, Assessment and Plan) notes presented at these sessions and the summary statements written by the resident for the educational community

**QUANTITATIVE ANALYSIS**
Radar graphs are used to track the progression of residents at each PGY level in attaining competency in lifelong learning skills (Keist et al., 2012). The study team will operationalize the assessed behaviors to the components of Self-Determination Theory. Composite radar graphs of all lifelong learning observable behavior scores for each PGY level will be analyzed to determine whether motivation levels can be assigned using only this numerical data.

- 3,695 individual scores representing the 3-year training period of 18 residents who graduated in academic years 2012-2014
- Scores assigned by clinical preceptors and objective, assessment and plan notes

**RESULTS**

**THEORETICAL FRAMEWORK**

**BACKGROUND**

Self-Determination Theory has been proposed as a model to support the development of adult learning in medical education (Whele et al., 2011). Previous work (Bandura et al., 2011) has indicated that family medicine residents needed to develop confidence in their self-directed learning skills and required support and residency culture and structural changes to develop these skills.

The Lehigh Valley Family Medicine Residency Program, as part of the Preparing the Personal Physician for Practice (PP) national demonstration project of innovation in family medicine residency training, restructured its curriculum to support residents in acquiring and applying the principles of adult learning. These changes included the addition of an individualized longitudinal curriculum, active participation in a community of practice beginning in year 1, a tailored advising and assessment process (Resident Assessment Facilitation Team, or RAFT), and focus on lifelong learning skills in periodic formative and summative assessments (Baglia et al., 2011; Foster et al., 2017; Foster et al., 2012; Keist et al., 2012).

**PURPOSE**
This study describes the trajectory of graduate medical learners’ development as internally motivated (activated) learners over a 3-year training period within a residency program designed to support the development of the autonomy, relatedness and competency.

**THEORETICAL FRAMEWORK**
The data analysis will be done from an adult learning (andragogy) theoretical perspective, based on the principals outlined by Malcolm Knowles (1984), focused on the development of intrinsic motivation, as described by Self-Determination Theory.