

Teachers' Professional Development, Emotional Experiences and Burnout

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Abstract: Teachers' professional development and its correlates is a subject yet to be properly explored and conceptualized. We tested the potential associations between teachers' professional development stage, emotional experiences at work and burnout. We adopted a view of professional development as 'frame of mind', shaping perception, emotional reactions, thoughts and function, rather than mere level of skills and knowledge. We hypothesized that teachers' developmental stages will differentiate their emotional reactions at work and their burnout level. Sample of 133 school teachers representing a broad range of tenure at work reported their self-perceived professional development stage, emotional experiences at work and experience of burnout. Results showed significant differences in positive and negative emotions between the developmental stages, as well as differences in burnout levels. Results are linking emotional experiences and performance among teachers throughout the career span. An integrative framework emerging from our data is presented and further research is called for.

Keywords: Stages of teachers' professional development; teachers' emotional experience; teachers' burnout; teachers' professional development

1 Introduction

Teachers' professional development and its correlates have received much attention in the educational and organizational literature (e.g. Dall'Alba & Sandberg, 2006; Little, 1993). The conceptual frameworks, methods and approaches to the subject are diverse, and seem to lack a consistent coherent frame (Desimone, 2009). In this study, we explored teachers' development through a proposed model of developmental stages, and its association with selected emotional outcomes of teaching. Based on our results we present a proposed integrative model to guide future research and hopefully, our understanding of psycho-social factors associated with teachers' emotional experiences and related outcomes throughout their career cycle.

2 Teachers' Professional Development

The literature addresses teachers' professional development from varying perspectives, using varying definitions. For example: Popular models of teachers' professional development stress knowledge within disciplinary boundaries set by the teachers' expertise (Van Driel & Berry, 2012). Other models focus on pedagogical knowledge, and the combination of both content-related knowledge and teaching know-how (Avalos, 2011). Additional models perceive teachers' professional development as a process of self-growth, with a recent growing interest in mindfulness as a key factor (Roeser, Skinner, Beers & Jennings, 2012).

Despite the differences, authors reviewing the field have stressed a few core aspects of the concept that are shared by most definitions and approaches: (a) Professional development is an ongoing process of meaningful change, (b) it is addressed on the individual level, that is – professional development takes place within the individual (though it may impact others, like students and peers, teams and organizations), (c) changes may occur in teachers' knowledge, know-how, meta-cognitive skills, personal and interpersonal insights or skills and any other aspect that may affect their function within the

professional domain, and (d) the above mentioned changes are expected to affect teachers performance as well as other outcomes such as learning, and organizational aspects of performance.

As mentioned above, professional development models often focus on field-specific content matter and skills, thus making generalization and application across disciplines and fields in teaching – challenging (e.g. Clarke & Hollingsworth, 2002). We therefore look at teachers' professional development from a more psychological-developmental perspective: we follow classic models of psychological and social development that portray the process as a series of stages, each characterized by a specific mindset (e.g.: Dall'Alba & Sandberg, 2008). In other words: development involves processes forming a meaningful series of experiences resulting in essential modification in teachers' cognitive and behavior patterns, including personal and professional insights, typical 'frame of mind', foci of attention and action typical of an individual teacher at a given time point in his/ her career (Villegas-Reimers, 2003). In this respect, we may view professional development as a structured process of changes in individuals' perceptions, processing and behavior patterns within the professional context, following well-established traditions of developmental models (e.g. Baltes, Reese & Lipsitt, 1980; Clegg & Bradley, 2006). Such approaches look for interpersonal commonalities and patterns characterizing stages along a continuum of development. Each stage represents perceptions, processes and behaviors typical of that specific point along the developmental path. We adopt this approach to describe a development process that can be applied to teachers in various fields and content matter areas, settings and levels. Assuming that each stage represents teachers' perceptions and typical reaction patterns to internal and external environments, we may expect such stage models to account for the variance in teachers' reaction patterns to the challenges of their work.

In this study we examine two emotional correlates of professional development: emotional experiences typical of each stage and burnout levels (Kabilan & Veratharaju, 2013; Zwart, Korthagen & Attema-Noordewier, 2014). We test these associations to propose a model tying together professional development, emotions and burnout. Such a model may guide future research and provide a deeper understanding of points of vulnerability and strengths along the developmental path of teachers.

3 Stages of Teachers' Professional Development

Earlier models of professional development focused on formal stages: For example one model suggested a two-step process of teachers' professional development including the pre-service training and the in-service was presented. Later, a three-step model replaced this model, including: initial training, entering the profession, leveling and the development of a full career (Fessler & Christensen, 1992; Hoyle, 1985; Jackson, 1992).

Models describing stages in a teaching career point toward two main frames of thought in this venue: (a) models that describe a linear progression, focusing on professional growth and progress, with constant improvement in one's abilities and professional proficiencies; and (b) models that describe 'ups and downs' in professional development, cyclical movement, progressions and withdrawals.

Following the second school of thought described above, the 'Teacher Career Cycle Model' (Burke, Christensen, Fessler, McDonnell & Price, 1987; Fessler, 1992), describes the following eight stages of teachers' professional development: Each describes perceptions, motivations and performance patterns typical of specific stages along teachers' work-life. All the above may frame teachers function, coping and in our context – emotional experiences and eventually – burnout (Zepeda, Parylo & Bengtson, 2014):

- *Pre-Service* - A stage of preparation for a specific professional role, including but not limited to studying in a college or university, supervised internships etc.
- *Induction* - The first few years of employment as a teacher. During this period, new teachers face challenges such as orientation, applying theoretical knowledge in the classroom, facing students and parents as well as peers and supervisors. While working to gain basic skills inductees often experience the pressures of professional and organizational socialization as they strive to achieve a certain level of comfort and security in dealing with everyday demands on the job.
- *Competency Building* - At this stage, teachers are striving to improve their teaching skills and abilities. They experiment with new materials, methods and strategies. At this stage, teachers

are often receptive to new ideas; they often regard their work as challenging and are eager to improve their skills.

- *Enthusiasm and Growth* - At this stage, teachers reach a high level of competence in their work and continue to progress professionally. Teachers often express high levels of satisfaction with their work at this stage, seeking out new ways to enrich their teaching and enjoy a high level of job satisfaction.
- *Stability* - At this stage, teachers' careers often reach a plateau. They do what is expected of them, and rarely more. Teachers in this stage or mindset, often find little value in professional development programs, and are seldom motivated to participate in professional programs.
- *Career Frustration* - This stage is characterized by perceived obstacles and hardships in teachers' experience of their work. Teachers often begin to question their choice of vocation.
- *Career Wind-Down* - At this stage teachers are preparing for exiting the profession. For some teachers, this may be a pleasant time characterized by a sense of achievement and fulfilment; for others it may be a bitter or unhappy period.
- *Career Exit* - The period after teachers leave their work.

The Teacher Career Cycle Model is not necessarily chronological in nature. Teachers may or may not experience some of the stages throughout their career and they may shift between the stages due to external factors (e.g. moving, promotion or demotion, unusual work-related events), experiences and personal factors. Each stage represents a set of patterns shaping an individual's function and behavior within a given time frame and circumstances (Cheung, 2005; Fessler & Christensen, 1992; Richter, Kunter, Klusmann, Lüdtke & Baumert, 2011). In other words – stages are relatively stable and do not shift within short term timeframes.

During the last decade, research in this field has focused mainly on two stages of teachers' professional development: The Induction Phase (e.g. Bezzina, 2006; Carver & Feiman-Nemser, 2009; Dalgarno & Colgan, 2007; Fantilli & McDougall, 2009; Krull, Oras & Sirje, 2007; Kyriacou & Kunc, 2007; Ulvik, Smith & Helleve, 2009; Watt & Richardson, 2008) and The career wind-down phase which includes preparations for retirement and exiting the profession (e.g. Kersaint, Lewis, Potter & Meisels, 2007; Loonstra, Brouwers & Tomic, 2009; Skaalvik & Skaalvik, 2009).

This study focuses on the following six of the eight stages mentioned above: Induction; Competency Building; Enthusiasm and Growth; Career Frustration; Stability; and Career Wind down. The stages of Pre-Service and Career Exit are not included in this research as it focused only on practicing teachers. The Teacher Career Cycle Model was chosen because it highlights the unique characteristics of professional development at each of the six stages and because it can be used as a practical tool to increase teachers' awareness of their own growth needs. The stages also frame and provide a potential for better understanding the psychological factors that shape teachers' experiences at work-including their emotional experiences. In this study, we examine two emotional correlates of teacher development: general emotional response at work and burnout.

4 Emotional Experiences and Responses

Emotional responses can be defined as arrays of multi-layered reactions to external and internal stimuli preparing individuals for action (Myers, 2002). In other words, emotional responses can be regarded as semi-automatic patterns that are mainly geared toward effective adaptation to opportunities and threats. One of the most basic categorizations of emotional reactions differentiates appetitive (positive, pleasant) emotions (like love, happiness, etc.) driving us to nurture and protect the subject of our emotion, from aversive (negative, unpleasant) emotions that drive us to fight or flee, thus reducing risk or danger (e.g.: fear, disgust, etc.) (Niedenthal, Halberstadt & Innes-Ker, 1999).

Theory as well as evidence suggests emotional reactions are at least partly beyond most individuals' control, and are embedded in our neurological and physiological substrata (Myers, 2002; Zysberg, 2016). Multi-factorial models of emotional experiences stress the interplay of physiological responses (arousal) and cognitive appraisal (based on environmental cues) in shaping our emotional response (e.g.: The two factor theory of emotion, see: Schachter & Singer 1962). In other words, emotional experiences involve subjective interpretation of our settings and circumstances, which in turn, shape our responses. In this

sense emotions can be a reflection of individuals' perceptions of their circumstances, including their work environment, career choices, etc.

Emotions are among the strongest, influential experiences and ample evidence has accumulated supporting their role in shaping work related and career related behaviors (e.g.: Fisher & Ashkanasy, 2000). One of the most common emotional experiences that shape long term behaviors and performance is stress. Stress is often defined as an emotional response to situations in which individuals perceive the existence of demands beyond their own available resources, or simply put – our basic response to threat (Maslach, 1999). While stress can be seen as an adaptive response to immediate, anecdotal, physical threats, there is ample evidence suggesting stress might be counterproductive when it comes to perceived abstract threats (e.g.: problems managing the classroom, or conflict with the principal, etc.) or long term conditions that pose threat to the individual (e.g.: Cherniss, 2016). The literature on stress tends to agree that unmitigated stress may often lead to a broad range of negative outcomes, among which burnout takes a major role. In the field of research on teachers and teaching, research indicated the significant extent of the role of emotions in learning and teaching, and that this kind of knowledge base should become an integral part of the standard teacher education curriculum (Kassem, 2002). Other studies mentioned that teaching as well as learning can be seen as emotional labor and not only the acquisition of knowledge, and skill (Cheung, Tang & Tang, 2011; Koçoğlu, 2011).

5 Burnout

Burnout among teachers is an acute challenge, affecting both newcomers (5 years or less in the profession) and tenured, with a recent estimate of about 27% of working teachers in the USA (Marshall, 2013). Other study indicates that in the sample of 490 teachers, 15 % had high burnout in at least two out of the three dimensions (i.e. exhaustion, cynicism and low professional efficacy) (Arvidsson, Håkansson, Karlson, Björk & Persson, 2016). Burnout is a condition of general emotional and mental exhaustion resulting from extended exposure to stress (Maslach, Schuefeli & Leiter, 2001). Short and long term effects of burnout have been thoroughly described in the literature and include detrimental outcomes for the individual teachers, their students, and the school system (Cherniss, 1992; Kyriacou, 1987, 2001): withdrawal from work and workplace involvement, psychosomatic complaints and ailments often leading to absenteeism, reduced productivity and deterioration of interpersonal communication patterns, team commitment - all leading to interruption of organizational culture patterns and productivity (Swider & Zimmerman, 2010).

5.1 Factors Associated with Burnout

Research into factors associated with teacher burnout has focused mainly on environmental and system related factors (e.g. compensation, work related pressures, work-load etc.) (Papastyliou, Kaila & Polychronopoulos, 2009; Van Veen & Slegers, 2006) and interpersonal factors associated with the concept of 'emotional labor' (Bakker & Schaufeli, 2000; Näring, Briët & Brouwers, 2006). Other studies showed that both personality and specific job stressors are associated with burnout dimensions and that personality and job stressors were found to be significant predictors of burnout (Kokkinos, 2007), and that increasing levels of burnout were associated with increasing levels of job demands, emotional demands and demands of hiding emotions (Arvidsson et al., 2016). Other studies indicate that even emotional exhaustion is positively associated with emotional job demands (Näring, Vlerick & Van de Ven, 2012). Fewer studies have looked into the personal factors associated with burnout: Since the phenomenon is directly related to stress, the personal resources available to the individuals allowing effective coping and stress management, should play a pivotal role in accounting for the experience of burnout on the individual level (Chan and Hui, 1995). Indeed, existing evidence associate lower levels of burnout with personal attributes such as personality traits considered effective in managing emotions (e.g. low neuroticism, see: Kokkinos, 2007), Self-efficacy (Dembo & Gibson, 1985), Intrinsic motivation and ability to create internal rewards (Brissie, Hoover-Dempsey & Bassler, 1988). This line of investigation, however, is far from exhaustive and there is a need for further exploration of personal assets that may 'protect' individuals from burnout. In this respect burnout may be seen as an outcome

of emotional experiences, balancing positive and negative emotions, where negative emotions lead to experiencing stress and positive emotions serve as a protective factor (Tugade & Fredrikson, 2004).

5.2 Burnout and Time

Another line of research focused on the nature of burnout along a time axis: Is burnout a stable condition, or a variable one? And if it is variable – how does it vary? Research along these lines is meager, and the existing results (usually not focusing on teachers) propose that burnout is stable across time (Hakanen, Schaufeli & Ahola, 2008). However, in a recent longitudinal study (Hultell, Melin & Gustavsson, 2013) the authors identified trajectories of change along time in teachers' burnout levels. The apparent contradiction in the results is attributed by the authors to the level of measurement. In this study, we propose a different factor that may account for teacher burnout levels across their career-professional development. We propose and test a set of hypotheses in which professional development frames and defines many of the above-mentioned factors associated with the experience of stress and its management across the span of teachers' careers.

6 The Current Study

As noted above, we assume each stage puts individual professionals in a different frame of mind that shapes their perceptions, interpretations and reactions to their reality. That being said, we may hypothesize that different professional development stages represent varying patterns of emotional reactions and hence to burnout and that levels of burnout will vary across the various stages, not necessarily in a linear manner.

For this purpose, we sampled teachers working in the state school system in Israel, with varying levels of education, tenure and from different disciplines. A correlational study design was used to examine the associations between the variables to test the following hypotheses: (a) Developmental stages will differ on teachers' positive and negative emotional experiences, and (b) Developmental stages will differ in levels of teachers' burnout. Establishing such result patterns may also give way to an integrative model linking stages of development as 'typical frames of mind' with emotional outcomes.

7 Method

7.1 Sample

One hundred and thirty three teachers were sampled from 3 different teaching colleges. They were attending professional training programs or Masters' degree programs, and were all practicing teachers, working 50% position and above. The mean age was 41 (sd=9.36) and tenure was 13.92 (sd=9.93) years. The majority, as expected, was women (88%), and most of them held a bachelor's degree (58%), followed by an advanced/graduate degree (36%) and the rest had a teaching diploma only. The majority (86%) identified themselves as Hebrew speakers, about 10% identified as Arabic speaking and the remaining minority was divided into various other languages, providing a good approximation of the teachers' population in Israel on the above demographics. Post hoc statistical power analysis yielded a power coefficient of .85 given the number of factors, sample size and analyses used.

7.2 Measures

7.2.1 Teachers' Stage of Professional Development (PD)

A self-report checklist containing 6 vignettes of which respondents are requested to check the one the most closely resembles the stage they feel they are in now. Each of the six professional development stages mentioned above is described in detail. Participants indicate their choice, based on their own evaluation of the professional stage that might correspond with their perceptions (Burke, Fessler & Christensen, 1984; Burke et al., 1987; Fessler, 1992). The measure used here showed acceptable reliability and construct validity in its original version (Burke et al., 1987). Test-retest reliability

estimating for the measure over a three to four week time period ranges from .7 to .8 (McDonnell, Christensen & Price, 1989).

7.2.2 Emotional Experiences

Emotional experiences were assessed using the PANAS (Expanded form, Watson & Clark, 1999). This is a well-accepted measure of positive and negative emotional experiences through self-report. The measure includes 60 items describing a broad palette of emotions divided into positive and negative values, ranked according to the extent they were experienced in the last few weeks prior to taking the measure, on a Likert type scale. We calculated 2 scores for each participant based on the mean score of their ratings of positive and negative emotions, based on the items classification detailed in the literature. The instrument has demonstrated excellent psychometric properties in the existing literature, with reliability indices ranging around .80-.90 (e.g. Crawford & Henry, 2004).

7.2.3 Burnout

Burnout was assessed using Friedmans' teacher burnout questionnaire (Friedman, 1993). An 18 item self-report questionnaire assessing teachers' perceptions and assessment of their own exhaustion, depersonalization and sense of non-achievement. We used the measure's total score, often used in the literature as a general indicator of burnout, used here as our target measure. The questionnaire is widely used in the literature and has shown good psychometric properties, with reliability indices ranging from .79 to .90 (Friedman, 2000).

7.2.4 Demographic Information

Demographic information was collected using an anonymous questionnaire. Participants were asked to report their gender, age, tenure, education level, native language, and other non-identifying demographics.

7.3 Procedure

Key-faculty at each College were contacted and requested to assist in recruitment. The study was approved by the IRB in each of the participating Colleges, Participants did not receive any compensation for participation, but it was explained to them that choosing whether to participate or not will have no implication whatsoever on their standing with their programs, and anonymity was assured. Paper copies were distributed in classes and workshops, and took approximately 20 minutes to complete. Filled out questionnaires were deposited in a collection box that was later emptied by the researchers.

8 Results

We first examined the descriptive statistics of the main variables, before testing our hypotheses. Table 1 summarizes the statistics

Table 1. Descriptive statistics for the main study variables (n=133).

Variable	Value Range	Mean (sd)	Cronbach's Alpha
Positive emotion	1-5	3.22 (.57)	.88
Negative emotion	1-5	2.06 (.55)	.76
Burnout	1-5	2.33 (.82)	.87
Professional development stage			
	1-Initiation 10%	--	--
	2-Competency 28%		
	3-Growth 30%		
	4-Stability 17%		
	5-Frustration 7.5%		
	6-Wind down 7.5%		

The results suggest that both emotional experience scales (positive and negative) distributed close to normal, as did the total burnout score. Cronbach's alpha coefficients suggest appropriate to good reliability coefficients for the variables at the focus of our analysis. The professional development stages,

a nominal variable, show a reasonable distribution of participants across the stages, congruent with the spread of tenure of the teachers in our sample.

To test the first hypothesis proposing that professional development stages differentiate level of positive and negative emotions on the job we used a Multiple analysis of co-variance using both emotional indices as dependent variables and professional development as the grouping variable controlling for tenure, gender and education level, variables often associated with teachers' emotional experiences at work (e.g. Johnson, Cooper, Cartwright, Donald, Taylor & Millet, 2005). Table 2 summarizes the results of this analysis and Figure 1 allows a more intuitive understanding of the result patterns.

Table 2. MANCOVA analysis: Positive and negative emotions as a function of professional development stage controlling for potential intervening factors (n=133).

Source of Variance	F (df)	Effect size
Professional development stage	2.68 (6)*	.12
	2.88 (6)*	.19
Gender	.61 (1)	
	.03 (1)	
Tenure	.09 (1)	
	.71 (1)	
Education	1.41 (1)	
	.70 (1)	

*p<.05

Note: the first row in each cell refers to positive emotions and the second to negative emotions.

Effect sizes are provided only for significant effects. We tested for possible interaction terms and none was significant.

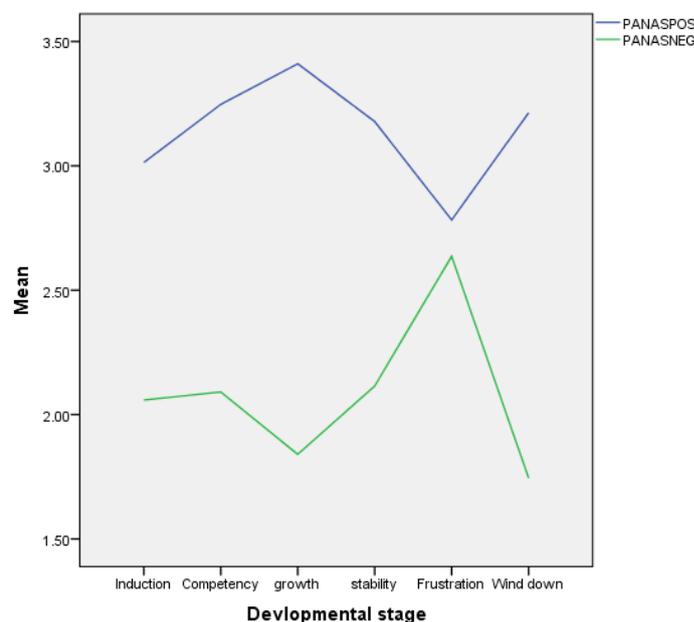


Figure 1. Positive and negative emotional responses by developmental stage.

Note: upper line denotes 'positive' and lower line denotes 'negative' emotions.

The results suggest a trend reflecting a 'mirror image' of positive and negative emotional responses typical of each stage with 'growth' characterized by the most positive (and lowest negative) emotions and 'frustration' characterized the most negative (and lowest positive) emotions.

We then tested our second hypothesis suggesting the professional development stages will differentiate varying levels of burnout among the participants. We used analysis of co-variance with burnout as the dependent variable, stages of development as the grouping variable and gender, tenure and education as covariates. The results are depicted in Table 3 and figure 2.

Table 3. ANCOVA for burnout scores by professional development controlling for potential intervening variables (n=133).

Source of Variance	F (df)	Effect size
Professional development stage	12.01 (6)**	.37
Gender	.49 (1)	
Tenure	.79 (1)	
Education	1.29 (1)	

**p<.01

Effect sizes are provided only for significant effects. We tested for possible interaction terms and none was significant.

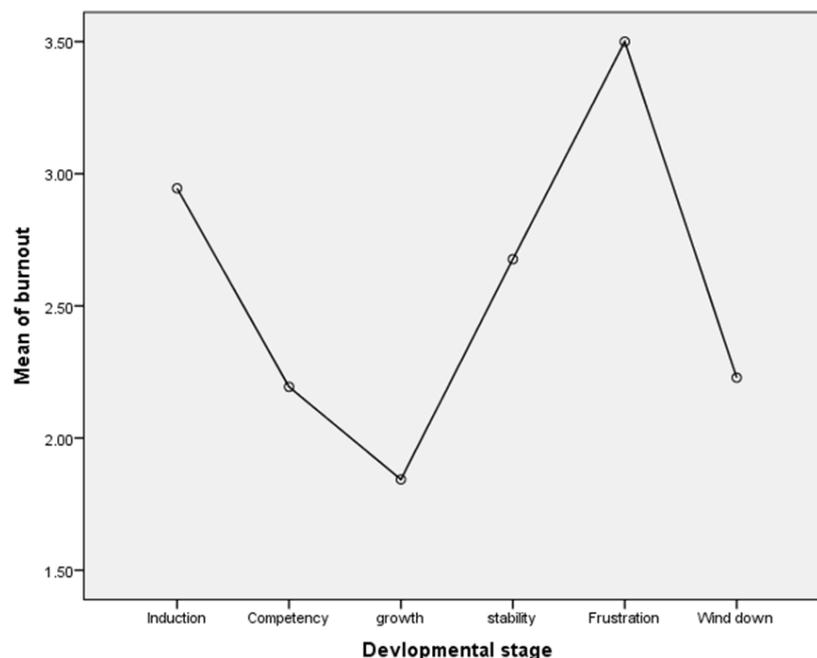


Figure 2. Burnout levels by professional development stage.

The results show that only the developmental stages differentiated between various levels of burnout. Interestingly, none of the background variables, traditionally associated with burnout levels in various professions showed a significant effect beyond our focal variable. Burnout levels varied dramatically among the various stages, expectedly peaking at 'frustration' and reaching their lowest point in the 'growth' stage. Interestingly, higher levels of burnout can be seen in the first stages, especially during 'induction'. This point is of interest since it goes against common perceptions of burnout as a cumulative process but fit evidence from the literature that will be discussed later.

Finally, though the association between emotional responses and burnout is hinted by the evidence presented so far, we used a multiple linear regression model to test the extent to which positive and negative emotions, alongside gender, tenure and education level. The analysis is summarized in Table 4.

Table 4. Summary of a multiple linear regression analysis for Burnout levels by positive and negative emotions, gender, tenure and educations level (n=133).

Factors	B	Beta	t (df)
Positive emotions	-.54	-.38	-5.19**
Negative emotions	.55	.37	5.04**
Gender	.32	.13	1.67 [^]
Tenure	-.01	.00	-.11
Education	.03	.04	.55

**p<.01

[^]p=.09

The results confirm the associations between negative and positive emotions and burnout, while gender had a marginal effect (which did not reach significance level). Both tenure and education level did not show associations with the target variable beyond the effects of emotional experiences. The two measures of positive and negative affect accounted for about 32% of the variance in teachers' burnout.

9 Discussion

In this study we sought to add to the conceptualization and empirically-based discussion of teachers' professional development and its emotional correlates by adopting and testing a less-common perspective: We adopted a view of professional development as a state-of-mind, following a tradition set by psychological theories of development, setting stages pertaining to typical perceptions, motivations and behavior patterns (for a review of the subject see for example: Lerner, 2001). We proposed that the stages of professional development, adopted from the Teacher Career Cycle Model (Burke et al., 1987; Fessler, 1992) shape teachers' experiences (focusing here on emotional experiences), associated in the literature with burnout (Zapf & Holz, 2006). We therefore hypothesized that the stages of professional development will differentiate levels of positive and negative affect as well as levels of burnout among practicing teachers.

Our results supported the hypotheses. Positive and negative affect varied across the stages of professional development in a sample of 133 teachers sampled from various campuses. The same was demonstrated for burnout across the developmental stages. Both positive and negative affect predicted burnout to the same extent, accounting for about 32% of the variance in teachers' burnout.

The results shed light on a few questions raised in the current body of research on teachers' development and burnout:

9.1 The Nature of Burnout

First is the issue of burnout across time. While most of the research suggests burnout can be an on-going, relatively stable, cumulative phenomenon across time (Armon, Shirom & Melamed, 2012), our results suggest otherwise: Burnout levels may vary and change across various stages of professional development, or stages in teachers' career. Changing professional circumstances, and mainly changing cognitive and motivational factors associated with the specific stage teachers are at, modify the mix of positive and negative emotional experiences teachers report, thus modifying the levels of burnout. These results echo similar trends found in recent studies (e.g. Hultell, Melin & Gustavsson, 2013).

9.2 Emotional Reactions as Risk, and Protective Factors of Burnout

Secondly, we found that both positive and negative emotional experiences contributed to the variance in teachers' burnout almost to the same extent. This result pattern suggests that while negative emotions might lead to burnout, positive experiences on the job may have a protective effect. These results are in line with some of the research on positive emotions at work and their effect on health, motivation and more (e.g. Little, Simmons & Nelson, 2007; Shirom, 2003).

9.3 Developmental Stages and Emotional Reactions

Our results suggest that teachers at the Enthusiasm and Growth stage reported the highest mean scores regarding their positive emotions, whereas those at the Career Frustration stage achieved the lowest mean scores. With regard to teachers' negative emotions and teachers' burnout levels, our findings reflect a 'mirror image' of the previously described pattern - teachers at the Career Frustration stage achieved the highest mean scores for negative emotion and teachers at the stage of Enthusiasm and Growth achieved the lowest mean scores. The differences described above are in line with other findings describing trajectories of teachers' attitudes and emotional perceptions toward training and professional development (e.g. Richter et al., 2011). Additional existing evidence indicates more positive attitudes at the Enthusiasm and Growth stage and most negative attitudes at the Career Frustration stage and the Career Wind Down stage regarding teachers' attitudes toward pedagogical changes as well as perception of teaching as a profession (Maskit, 2011, 2013). Another study found an association between emotional ability and the stage of development according to the same model (Maskit, 2015). Understanding these stages and their associations with diverse outcomes may provide us with more effective means of understanding, framing and managing teacher development.

9.4 Toward an Integrative Model of Developmental Stages and Emotional Outcomes

Based on the result patterns found in this study and those briefly reviewed above we may suggest an emerging integrative model accounting for emotional outcomes in teachers through their progression through the developmental stages. Figure 3 summarizes the model

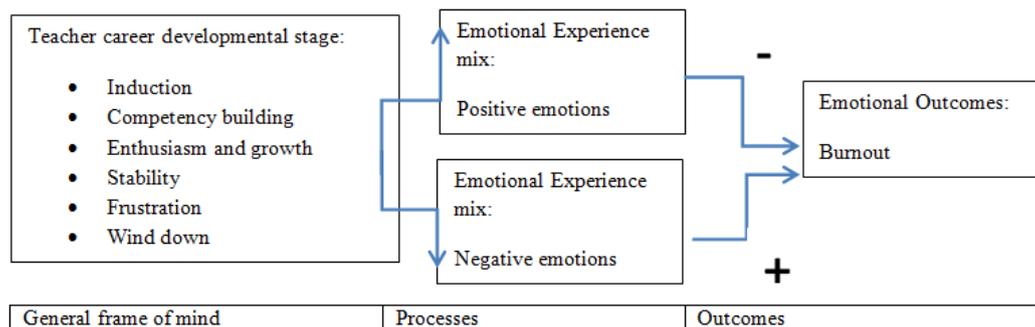


Figure 3. An emerging integrative model of developmental stages and emotional outcomes among teachers throughout their career cycle.

The model looks at three levels of teachers' work-related experience with emphasis on emotional processes (experiences) and outcomes (in this case: burnout): The stages of development set the stage so to speak to teacher's processing of their personal and work experiences, thus generating a varying mix of positive and negative emotional experiences on the job. This mix (positive emotions are protective, negative are risk factors of heightened levels of burnout) contributes to varying levels of burnout typical of each stage.

The proposed model integrates the three focal concepts in this study and offers an organizing hierarchy and a framework that puts them in an order that may allow future studies to assess causal association among the concepts, points in which interventions are possible to change outcomes, etc. The model in its current form focuses on emotional processes and outcomes but may be extended to additional processes and outcomes such as motivation, commitment, perceived efficacy and other psychological outcomes relevant to teachers' career development and management. This model needs support from additional studies and in this respect it may guide future studies in this venue, to test its applicability in varying settings, cultures, and education systems.

9.5 The Study Limitations

The study's results should be read considering its limitations: our sample, though adequate in terms of statistical power, and reasonably representative of the teachers' population in Israel's state-school system (Israel's official school network attended by over 85% of the target population), is still limited in scope and may limit generalizability to other settings and systems. Our measures were all self-report, taken within a correlational study design, thus allowing self-report biases, and limiting our ability to discuss causation. That being said, we used widely acceptable measures, and the results do echo similar findings from around the globe suggesting our findings can be relevant beyond the specific settings presented here.

Our findings join a body of research that may inform both future research of professional development among teachers, not only in terms of training and learning but also as a psychological development process that may shape teachers' perceptions and reactions, indirectly associating with outcomes such as burnout on one hand and personal growth (Bakker & Bal, 2010), and performance (Fullan, 2014) on the other.

In the field, leaders and training developers may consider a broader view of teacher development, including a personal angle taking into account the whole person, their outlook and perceptions, as well as emotional reaction patterns as key for understanding a broad range of outcomes, burnout included.

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