Sources of Expectancy Information Among College Coaches: A Qualitative Test of Expectancy Theory

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ABSTRACT
Expectancy theorists contend that coaches utilize a variety of impression cues for information-gathering tasks. The purpose of this study was to examine college coaches' perceptions of athletes by exploring the sources that coaches use to assess athlete achievement. Eighteen NCAA Division I intercollegiate head coaches participated in semi-structured interviews. An inductive/deductive content analysis revealed the existence of six expectancy dimensions for coaches: personality, performance, personal, cognitive, mistakes, and knowledge from others. The most salient dimensions were personality and performance cues comprising 42% and 32% of the raw data quotes respectively. Team and individual sport coaches agreed that work ethic and motor skills were very important, whereas they differed on the importance of team qualities, mental strategy, and sport-specific skills. Future research directions include the creation of a quantitative assessment tool to access sources of expectancy information among college coaches and intervention techniques useful in the sport setting.

Key words: Coaching, College Athletics, Expectancy Theory

INTRODUCTION
A primary goal of athletic coaches at all levels of competition is to facilitate the skill development of their athletes. In order for coaches to assess the best means for developing individual athletes, they must process a significant amount of information about the athlete and the unique demands of the sport and integrate this with their mode of coaching style. Expectancy theorists contend that leaders utilize a variety of impression cues for this information-gathering task. In short, expectancy theory states that an external expectation serves as a stimulus to behavior causing the expectation to come true [1]. From the early work in sociology to the field of education, scholars have acknowledged the magnitude of expectancy effects on behavior in general and achievement behavior in particular [1-5].

Rather than simply assessing the presence of expectancy effects, recent research findings suggest that low expectations are particularly powerful in educational settings [6]. Specifically, "teacher perceptions predicted achievement scores more strongly for low achievers than for high achievers" [6].

Through a meta-analytic procedure, Rosenthal [7] determined that individuals labeled as high achievers are awarded more beneficial treatment than their low achieving counterparts in four important ways. Termed the Four Factor Theory, Rosenthal [7] showed that high expectancy students are issued better quality feedback in greater amounts, are afforded a warmer socio-emotional climate, are offered more opportunities for input (i.e., more challenging tasks), and are offered more output opportunities (i.e., given more time to respond to questions).

The potential impact of expectancy effects in competitive sport settings was acknowledged in the late 1970s [8]. From that time to the present, the work of sport scholars has focused on only one of the factors identified by Rosenthal, the feedback factor. Furthermore, many of the researchers embraced the four-step self-fulfilling prophecy cycle originally proffered by Martinek et al. [8] and elaborated by Horn et al. [9]. This cycle is theorized to work as follows. First, coaches develop initial expectations about athletes based on various impression cues. The two broad categories of cues include performance cues (i.e., past performance, effort in practice) and personal cues (i.e., age, ethnicity, gender). Second, coaches' expectations affect their behavior and thus they offer differential treatment, primarily in the form of feedback, to athletes contingent upon their expectations of athletic achievement. Third, coaches' behavior affects athletes' behavior and performance as athletes respond to the feedback issued. Finally, the self-fulfilling prophecy cycle is completed when those athletes who are deemed high expectancy do in fact conform to that initial expectation while those dubbed low expectancy also align with the coaches' impression.

This four-step cycle has been useful in outlining the processes that take place when a coach is "sizing up" his/her athletes. Recent inquiry on "expert coaches" reinforces aspects of this cycle [10, 11, 12]. While creating the Coaching Model, Côte et al. [10] found that "When expert coaches estimated a gymnast's potential, they considered …the gymnast's personal characteristics and level of development" (p. 13). Similarly, the categories derived from interviews with expert judo coaches and athletes contained evidence related to the coach's initial and continual evaluation of athlete ability [11]. For example preferential treatment by coaches was noted and showed that "coaches' behaviors toward athletes they supported increased [the] number of instructions and feedback during training sessions…" (p. 325). These examples evoke the processes taking place in the first two steps of the self-fulfilling prophecy cycle.

The endorsement of the four-step cycle is partially responsible for the operationalization of coach expectations. Specifically, the assumption of this model and the majority of research on expectancy effects in sport is that coaches rely predominantly, if not solely, on impressions of physical ability to assess athlete achievement. This is evidenced by the manner in which researchers obtain coach expectations of athlete achievement. The vast majority of expectancy theory researchers simply ask coaches to hierarchically rank their athletes from the most skilled to the least skilled [13-15]. While the wording in the directions may vary slightly, this concept of "skill" is obviously referring to physical ability.

Utilizing this cycle with the emphasis on feedback patterns, and operationalizing expectancy level by physical ability, the research findings are quite consistent. From high school [16, 17] to college [15, 18, 19] through elite athletics [20], evidence of differential feedback based on expectancy level is reported. After having coaches hierarchically rank

their athletes, sizable differences appear in the quantity and quality of feedback offered to high expectancy versus low expectancy athletes.

In order to counter the limitation posed by the simple hierarchical ranking procedure, Solomon [21] created the Expectancy Rating Scale (ERS). This 5-item Likert-type scale, while still focusing on physical ability as the impression cue of interest, expanded the criteria somewhat by offering coaches a broader definition of physical ability. Instead of simply accumulating a rank order of athletes on a team, the ERS allows for individual assessment on five specific physical ability components. In fact, two or more athletes on the same team can actually have identical scores. Content validity and reliability via alpha reliability coefficient procedures (r = .79) were obtained [22] for this instrument.

Those who have worked in the athletic realm know that coaches certainly utilize more complex and diverse information sources for evaluating athletes than physical ability. Similarly, those examining expectancy effects in education offer a conceptual model which includes student academic performance as a primary source of teacher information but also include personal and personality characteristics as secondary sources of influence [6, 23]. While sport psychology researchers have taken an active interest in expectancy theory, none has challenged a basic void in the theory. Recall that the first step of the four-step cycle claims that coaches develop initial expectations based on performance and personal impression cues. Solomon [22] noted that:

> Impression cues derived regarding psychological dimensions of athletes have never been studied as a source of expectancy information. This is particularly puzzling considering the wealth of research examining the relationship between various psychological factors and performance. [22, p. 90]

To address this issue, Solomon [22, 24] designed research to ascertain whether coaches use psychological cues. Using the ERS to assess coach expectations of athlete physical ability and an adapted version of the Trait Sport Confidence Inventory [25] to assess coach expectations of athlete psychological ability, results indicated that among college head coaches, psychological cues served to predict actual athlete performance while physical ability cues did not. Thus, Solomon [22, 24] confirmed that coaches use psychological information to assess athlete achievement and this information predicted athlete performance. This extension of expectancy theory provided validation that coaches are multidimensional in their utilization of impression cues. However, Solomon only included one psychological variable, confidence, as an impression cue. What is still unknown is which expectation sources are most salient to coaches. The purpose of this study was to examine college coaches' perceptions of athletes by exploring factors that inform their expectations of athlete achievement; specifically we are accumulating information which coaches use in the first step of the self-fulfilling prophecy cycle. Due to the significance of the sport context [12], a secondary purpose sought to elucidate the similarities and differences in coaches' perceptions of athlete achievement based on type of sport coached (individual/dual or team).

METHOD
PARTICIPANTS
A strategy of purposeful sampling was initiated in order to generate a large, diverse sample. Selection criteria considered such issues as type of sport, time of season, gender of coach, and gender of athlete. Twenty-four intercollegiate head coaches representing four NCAA Division I athletic programs in the south central United States were invited to participate; 12

were individual or dual sport coaches and the other 12 coached team sports. Twenty-two agreed to participate while two declined; two of the 22 who accepted could not find time in their schedules for the interview. Thus, a total of 20 coaches served as sample members. Unfortunately, two audio taped interviews of team sport coaches (one from a basketball coach and one from a soccer coach) were lost due to equipment failure. The final participant count consisted of eighteen intercollegiate head coaches ranging in age from 28 to 60 (M = 40.67). The sample included fourteen male coaches and four female coaches of eleven male and seven female teams. Ten participants coached individual/dual sports (five golf and five tennis coaches) and eight coaches led team sports (four basketball, two baseball, and two soccer coaches). Note that without the loss of the two interviews, the sample would have been equally balanced between individual/dual and team sport coaches. Six teams were in season (basketball and soccer), two were in pre-season (baseball), and ten teams were in between their Fall and Spring seasons (golf and tennis teams) when the interviews took place. While winning status was not a selection criterion, it is interesting to note that 14 of the 18 teams (78%) had a winning season.

MEASURE

The most valuable tool to address the purpose of this study was deemed to be an interview format. This would allow for the coaches to express what they purport to be essential facets in assessing athlete ability. A 12-item interview protocol was generated for this purpose. The interview items were created using information from previous research and a panel of six professionals including coaches and sport psychology experts. Initially, ten interview items were developed. These items were independently submitted to the panel of three intercollegiate coaches and three sport psychology professionals. Through this process, items were revised, deleted and added. The final interview protocol contained twelve items, which are presented below:

- How do you assess ability in athletes?
- Do you use any strategies to gauge the accuracy of your estimations?
- How flexible are your assessments of your athletes?
- What factors do you consider when determining whether an athlete will meet her/his potential?
- What distinguishes high ability and low ability athletes? Do these factors differ for Freshman and Seniors?
- When scouting high school athletes, what characteristics do you consider?
- How do you decide who will be your starters? Does that vary from game to game?
- Imagine that a key starter is in a slump. Are you likely to bench that athlete? What factors do you consider when making this type of decision?
- How do you decide who your team leaders are?
- What are the key elements for ensuring positive team chemistry?
- If I were to ask you for a profile of successful athletes, what attributes or characteristics might distinguish him/her from a less skilled athlete?
- What mistakes have you made in all of your experiences in assessing talent in your sport? What have you learned?

These questions served as the framework for the conversation. Additional follow-up questions were integrated where appropriate in order to achieve further substantiation or clarification of a point.

PROCEDURE

Permission was sought and granted prior to data collection from the Committee for Protection of Human Subjects and the athletic directors at each university. Upon approval, coaches were sent a letter via e-mail explaining the purpose of the study and that they would be contacted by telephone to discuss questions and/or set a meeting time. The first author interviewed and collected all of the data on the twenty coaches in order to achieve consistency across interviews.

All interviews took place in the coach's office. Upon arrival, the researcher reiterated the purpose of the study and asked the coach to read and sign a consent form. Upon completion of these preliminary procedures, the audiotape recorder was engaged. Informal interaction was then initiated by the researcher to develop rapport and obtain basic demographic information including age, sport experience, and coaching experience. The formal interview process then began and ranged in time from 35 to 65 minutes. At the conclusion of each interview session, each coach was told to expect a copy of her/his interview script to assess the accuracy of its contents. Also, a final report summarizing the group findings would be sent at the conclusion of the study.

The interviews were audio taped using a micro cassette recorder and transcribed verbatim by a professional transcriptionist. The recorder failed to adequately record two of the interviews (one basketball coach and one soccer coach). A total of 208 single-spaced pages were produced from the 18 interviews and became the final data source for this study.

DATA ANALYSIS

The data were subjected to a series of analyses with respect to the quality and quantity of information obtained. An inductive/deductive content analytic procedure was performed [26]. Because the basis of the interview questions were contextualized within the framework of expectancy theory, it was deemed most appropriate to honor the three existing impression cue categories (performance, personal, personality) as potential dimensions. However, we sought not to restrict the direction of the data by limiting the thematic development solely to these categories.

Similar to previous qualitative inquiry in recent sport psychology research, the authors followed a series of formalized, planned stages in order to achieve accurate and honest resultant outcomes [27-29]. The two researchers independently read the 208 single-spaced pages of verbatim transcripts three times. On the third reading, each researcher highlighted relevant quotes that answered the key question: "What impression cues do coaches use to define and/or assess athlete achievement?" On the fourth reading, the researchers became a team and jointly identified quotes that answered the research question. A total of 322 individual quotes (from a single word to an entire paragraph) were identified during this fourth reading.

As the data analysis progressed, the raw data quotes merged into 56 lower order themes. From this level of analysis emerged the next level, the development of 17 higher order themes. Finally, the researchers ascertained that these 17 higher order themes merged into six dimensions. The three expectancy theory impression-cue categories were recognized as well as three additional dimensions.

A series of procedures were implemented throughout the processes described above in concert with established qualitative analytic properties [30, 31]. Data triangulation was performed in two ways. Prior to the data analysis, each coach received a copy of her/his interview. On a cover page, s/he was asked to edit for accuracy and expound on any issue that was not fully conveyed. Of the 18 coaches, five returned their transcripts with minor

editorial commentary. The other 13 coaches acknowledged that the material as presented was accurate and complete. In addition, cross validation procedures were instituted throughout the data analysis. A professor of psychology, familiar with expectancy theory, was hired to substantiate the inductive/deductive content analysis process. First, the associate was asked to align the lower-order themes with their respective higher-order theme and yielded an agreement percentage of 87%. Then, the associate applied the higher-order themes to one of the six dimensions with an agreement rate of 94%.

RESULTS

The inductive/deductive content analysis performed on the data obtained from interviews with 18 Division I intercollegiate coaches generated 208 pages of data. From this rich set of qualitative data, the researchers independently and jointly extracted 322 direct quotes (labeled raw data quotes), which led to the induction of 56 general categories (labeled lower order themes). These 56 lower-order themes were further reduced to engender 17 more specific categories (labeled higher order themes). These 17 higher-order themes summarily developed into six categories (labeled dimensions), which encompassed all levels of data. These six dimensions contained, and consequently reinforced, the impression cues, which serve as the underpinnings of expectancy theory (performance, personal, personality) and accounted for 83% of the raw data quotes. In fact, the vast majority of raw data were categorized as either Performance or Personality (n = 238, 74%). However, by allowing for an inductive process, three additional dimensions emerged (Cognitive, Mistakes, Knowledge from Others) which offer insight into how coaches develop expectations about athlete achievement.

PERSONALITY DIMENSION

The Personality dimension, which was added to expectancy theory recently [22], was defined as impression cues related to athlete personality capabilities. All 18 coaches (100%) cited personality factors. Of the 322 raw data quotes, 135 (42%) were identified as personality. Six higher-order themes expressed in this dimension included (in order of frequency reported) work ethic, team qualities, mental strategies, character, coachability, and confidence. Examples of the lower-order themes associated with the higher-order theme of work ethic included high aspirations, discipline, and hard worker. Raw data quotes that generated the lower order theme of hard worker included "*I am looking for the guy that wants to come every day, work hard, be consistent…*" and *"I believe in hard work."* For the lower order theme of receptivity to coaching, housed in the higher-order theme of coachability, relevant raw data quotes included *"I want the kids who want to be coached"* and *"…willingness to accept coaching."* The inductive/deductive content analysis showing the lower-order (n = 25) and higher-order themes (n = 6) in the personality dimension is depicted in Figure 1.

PERFORMANCE DIMENSION

The Performance dimension was defined as impression cues related to athlete physical capabilities. Recall that this is the core operationalization for the majority of sport expectancy research to date. Again, all 18 coaches (100%) cited performance factors. The researchers assembled 103 (32%) raw data quotes that fit this dimension. Four higher-order themes represented this dimension including (in order of frequency reported) quantitative methods of assessment, sport-specific skills, motor skills, and athleticism. Examples of the lower-order themes associated with the higher-order theme of quantitative methods of assessment include records, qualifying, and testing. A sample raw data quote that astutely

depicts the lower-order theme of testing was stated by a tennis coach who explained that

> "*I have a set of procedures or tests that I have them do when they come in here and every month I retest them and see how they improve…we have like a 100-yard sprint or a one mile run that they have to do in under 7 minutes…*"

Lower Order Themes	Higher Order Themes	Dimension

Hard worker
High aspirations
Discipline → Work Ethic
Competitiveness
Love of the sport

Team chemistry
Role acceptance
Communication → Team Qualities
Program fit
Leadership qualities

Handling pressure
Concentration
Mental maturity → Mental Strategies → Personality
Demeanor
Offensive style of play

Receptivity to coaching
Willing to listen → Coachability
Willing to learn

Integrity
Courage
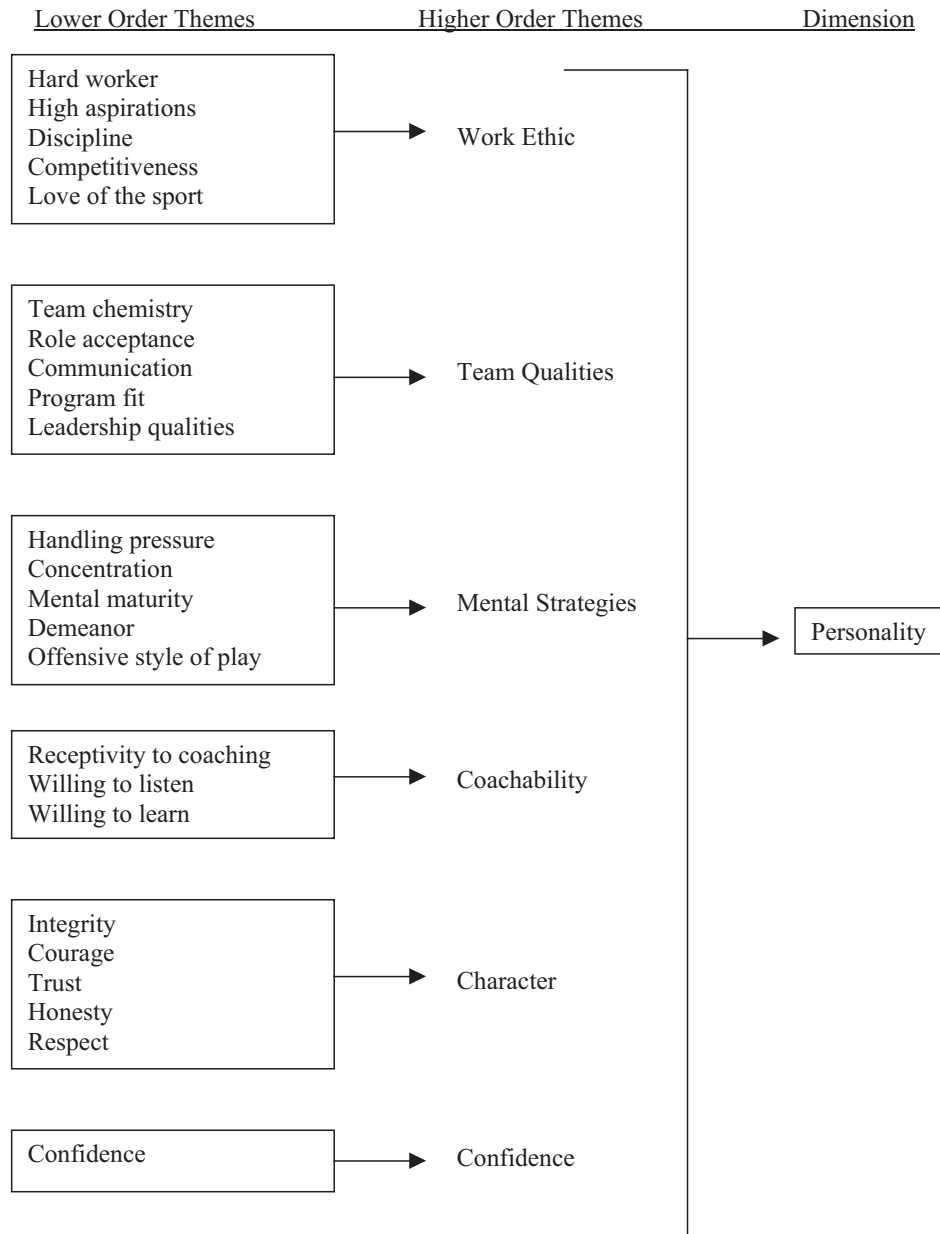Trust → Character
Honesty
Respect

Confidence → Confidence

Figure 1. Personality Dimension: Inductive/Deductive Content Analysis

For the lower-order theme of qualifying relevant raw data quotes included "*We qualify for every tournament*" and *"…when we get here the first of the year we qualify."* The inductive/deductive content analysis illustrating the lower order (n = 16) and higher order themes (n = 4) for the Performance dimension is shown in Figure 2.

Lower Order Themes	Higher Order Themes	Dimension

Testing
Records
Qualifying
Drills
→ Quantitative Methods of Assessment

Golf skills
Tennis skills
Basketball skills
Soccer skills
Baseball skills
→ Sport Specific Skills

Performance

Coordination
Strength
Speed
Reaction
Agility
→ Motor Skills
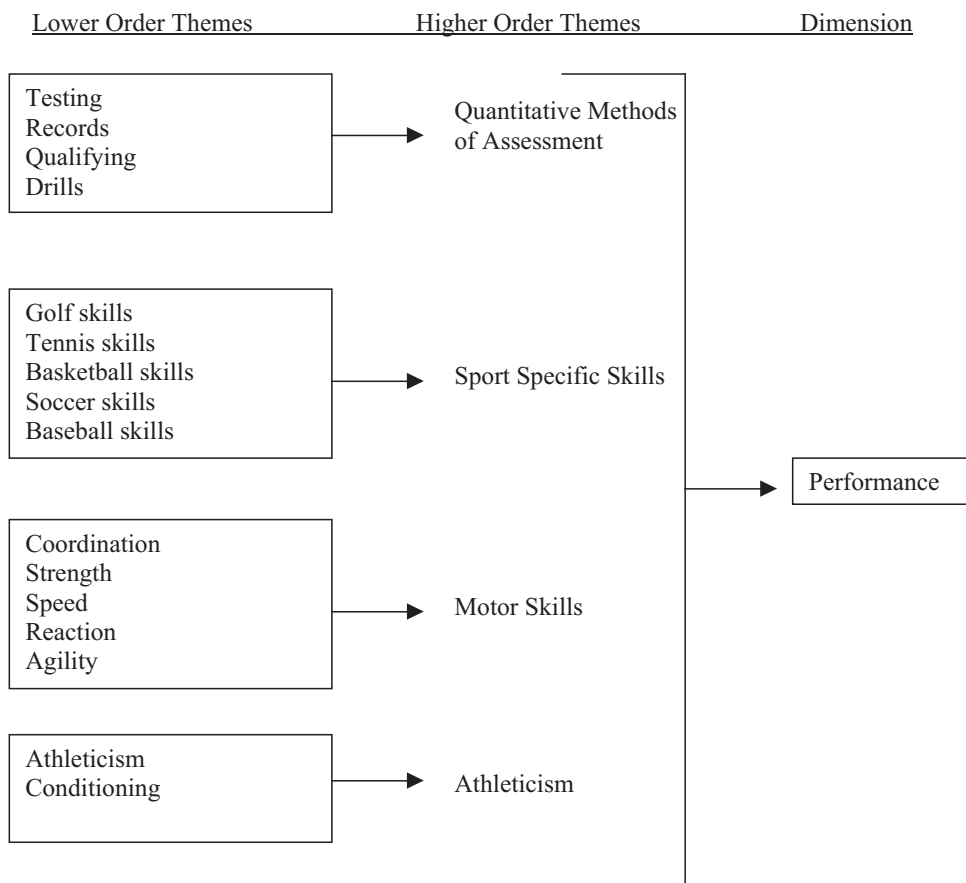
Athleticism
Conditioning
→ Athleticism

Figure 2. Performance Dimension: Inductive/Deductive Content Analysis

PERSONAL DIMENSION

The Personal dimension was defined as impression cues related to athlete personal characteristics. Of the 18 coaches in the sample, 14 (78%) cited personal factors. The researchers gathered 29 (9%) raw data quotes that elucidated this dimension. Two higher-order themes represented this dimension: maturation and family dynamics. There were two lower-order themes associated with the higher-order theme of maturation: body size and experience. The term "maturation" was utilized to describe this higher-order theme in light of how the coaches, themselves, articulated the use of experience and body size as maturational components of athlete development. One raw data quote that generated the lower-order theme of experience was *"The more experience they get, the better they get."* A golf coach explained the impact of experience on assessing athlete ability by stating:

> *"I honestly feel by bringing in somebody that's a little bit older that, that has good, good ability, if that is going to bring more leadership, then I will do that."*

The inductive/deductive content analysis picturing the lower order (n = 3) and higher order themes (n = 2) in the Personal dimensions is illustrated in Figure 3.
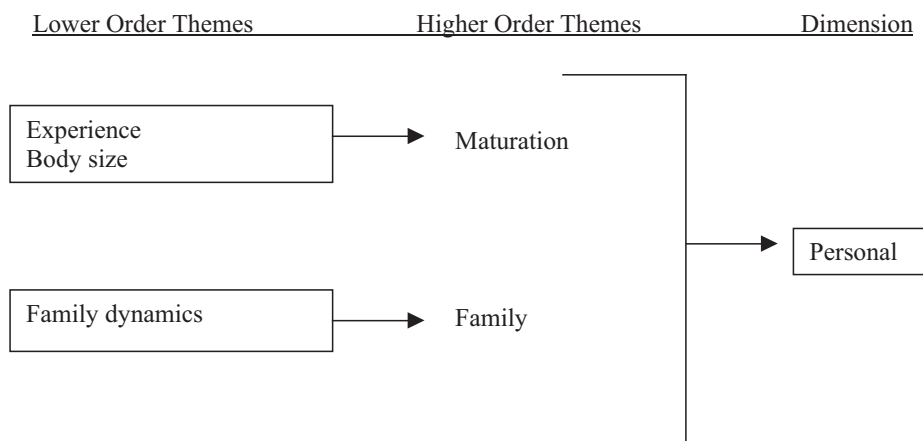
Lower Order Themes   Higher Order Themes   Dimension

Experience
Body size   →   Maturation

Family dynamics   →   Family   Personal

Figure 3. Personal Dimension: Inductive/Deductive Content Analysis

COGNITIVE DIMENSION

The Cognitive dimension was defined as impression cues related to athlete knowledge capabilities. Of the 18 coaches in the sample, 12 (67%) cited cognitive factors. The researchers located 25 (8%) raw data quotes that fit into this dimension. Two higher-order themes define this dimension: academics and tactics. Raw-data quote examples of tactical knowledge included *"[we are always looking for] a complete player…who I think understands the game much better"* and *"…are they just out there going through the motions or do they really know what they're doing out there?"* The inductive/deductive content analysis showing the lower order (n = 2) and higher order themes (n = 2) in the Cognitive dimension is delineated in Figure 4.

MISTAKES DIMENSION

The Mistakes dimension was defined as impression cues related to errors in judging athlete ability. Of the 18 coaches in the sample, 13 (72%) cited mistakes, which factored into assessments of athlete ability. The researchers identified 22 (7%) raw-data quotes that inspired this dimension. The two higher-order themes, which represent this dimension, include errors in recruiting and errors in coaching style. Examples of lower-order themes associated with the higher-order theme of errors in recruiting are: relying on other's opinion, procrastination, and incomplete assessment. Raw-data quotes that generated the lower-order theme of incomplete assessment included: *"I need to really do better assessments and better evaluations…"* and *"The biggest thing [mistake] I've made is probably not seeing the guy play enough."* Several coaches voiced one recurring theme regarding insufficient assessments. One basketball coach said: *"I learned that you need to go see them one, two,*

three times maybe to make sure that this kid is the same one because, we all have good days."
A tennis coach made a remarkably similar statement when he commented:

> *"Well it's mainly to do with first impressions…I mean if you feel compelled
> to look at someone play tennis, I really believe you've got to watch them
> play three or four times."*

The inductive/deductive content analysis showing the lower order (n = 8) and higher order
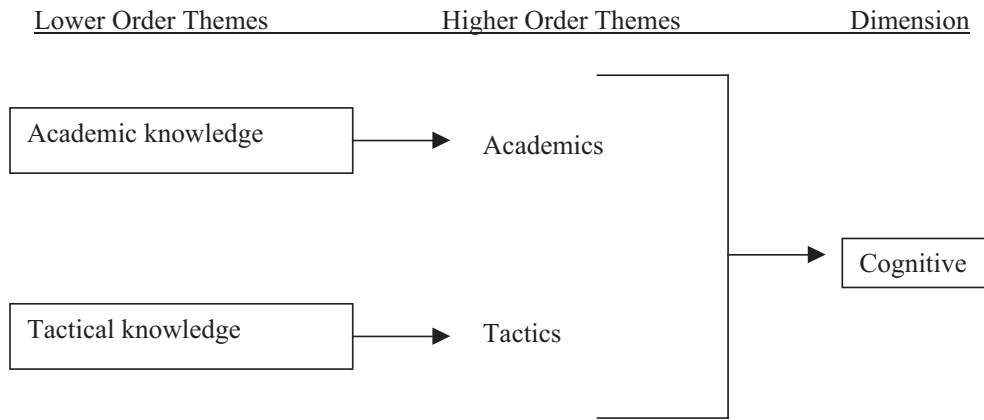themes (n = 2) for the Mistakes dimension is represented in Figure 5.

Lower Order Themes   Higher Order Themes   Dimension

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┌─────────────────────┐
│ Academic knowledge  │ ──►  Academics
└─────────────────────┘                                           ┌───────────┐
                                                                  │ Cognitive │
┌─────────────────────┐                                           └───────────┘
│ Tactical knowledge  │ ──►  Tactics
└─────────────────────┘
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Figure 4. Cognitive Dimension: Inductive/Deductive Content Analysis

Lower Order Themes   Higher Order Themes   Dimension

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┌──────────────────────────┐
│ Relying on other's opinion│
│ Procrastination           │
│ Incomplete assessment     │
│ Forgetting athlete will   │ ──►  Errors in Recruiting
│        improve            │                                    ┌──────────┐
│ Perception one can change │                                    │ Mistakes │
│        athlete            │                                    └──────────┘
└──────────────────────────┘

┌──────────────────────────┐
│ Intra-team competition    │
│ Punishing poor play       │ ──►  Errors in Coaching
│ Rigidity of rules         │      Style
└──────────────────────────┘
```
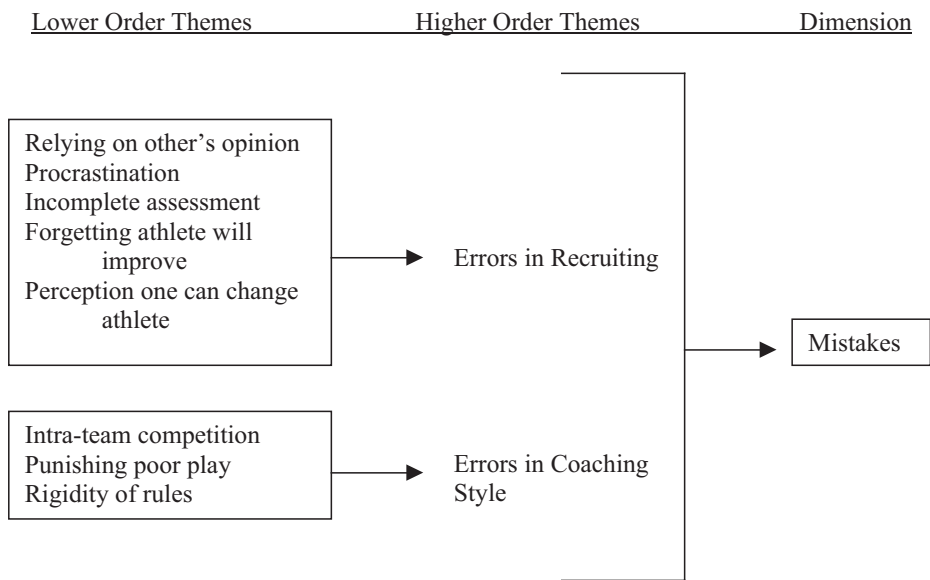
Figure 5. Mistakes Dimension: Inductive/Deductive Content Analysis

KNOWLEDGE FROM OTHERS DIMENSION

The dimension labeled knowledge from others was defined as impression cues related to the use of other's input in assessing athlete ability. Six of the 18 coaches (33%) cited using other sources to assess athlete ability. The researchers located 8 (2%) raw data quotes, which created this dimension. One higher-order theme represented this dimension, also labeled knowledge from others. There were two lower-order themes: knowledge from others – athletes, and knowledge from others – coaches. Raw-data quotes that generated the lower order theme of knowledge from others – coaches included *"…we call people that know them in a different manner, we call an opposing coach"* and *"I go…with other coaches who have seen them over a longer period of time than I have."* The inductive/deductive content analysis showing the lower order (n = 2) and higher order themes in the Knowledge from Others dimension is displayed in Figure 6.
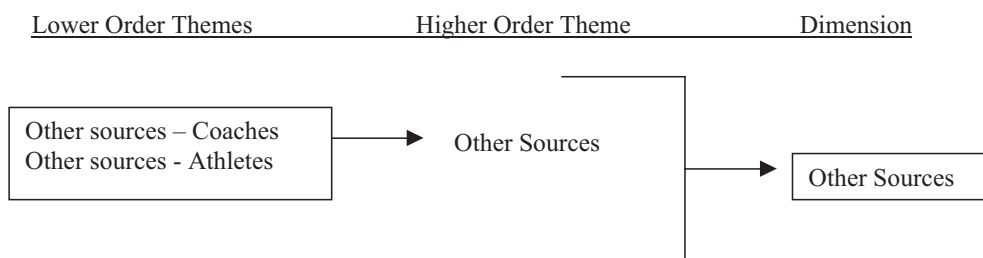

Figure 6. Other Sources Dimension: Inductive/Deductive Content Analysis

FREQUENCY ANALYSES

The higher-order themes were subjected to two frequency analyses. First, all of the coaches' patterns of responses were tabulated to determine the number and percentage of coaches who contributed to each dimension and higher-order theme. Table 1 documents the results of this analysis. Note that data from the majority of coaches are represented in five of the six higher order themes.

The second frequency analysis was conducted by partitioning the coaches into two groups: individual/dual (n = 10) and team (n = 8) sport coaches. Table 2 shows this set of results. Of particular interest are some of the different representations of coaches in the Performance dimension. Team sport coaches (88%) identified sport-specific skills as an important form of assessment, while fewer individual/dual coaches (50%) acknowledged this as a factor in assessing ability in athletes. When examining results from the Personality dimension patterns of coach responses indicate that more individual/dual sport coaches (80%) valued mental strategies as a form of assessment when compared to team sport coaches (50%). Similarities between groups are also evidenced, particularly in the Performance dimension motor skill theme and in the Personality dimension work ethic theme. While there is some logical overlap between the two groups of coaches, distinct patterns of differences are also evidenced and lend insight into the unique aspects of coaching individual/dual versus team sports.

DISCUSSION

The present study was conducted in order to allow coaches to inform the researchers directly about their assessment of athlete achievement. Eighteen coaches were interviewed and the information was subjected to a systematic qualitative inductive/deductive content analytic

procedure. From this analysis, the three expectancy theory impression cue categories were substantiated; in addition, three new sources of expectancy information emerged. These six dimensions housed all of the 17 higher-order themes, 56 lower-order themes, and 322 raw-data quotes. Overall the findings demonstrate that there is a wealth of factors coaches might consider when assessing athlete ability or achievement. This concept of ability is multidimensional and includes the traditional performance component, but also contains personality, personal, cognitive, mistakes, and knowledge from others sources of information.

Table 1. Percentage and Frequency of Impression Cue Dimensions and Related Higher-Order Themes Among All Coaches

Dimension Higher Order Theme	Dimension %	Dimension n	Higher Order Theme %	Higher Order Theme n
Personality	100%	18		
Work Ethic			83.3	15
Team Qualities			77.8	14
Mental Strategies			66.7	12
Coachability			38.9	7
Character			38.9	7
Confidence			16.7	3
Performance	100%	18		
Quantitative Aspects of Coaching			88.9	16
Sport Specific Skills			83.3	15
Motor Skills			66.7	12
Athleticism			33.0	6
Personal	77.8%	14		
Maturation			72.2	13
Family			38.9	7
Cognitive	66.7%	12		
Academics			61.1	11
Tactics			27.8	5
Mistakes	72.2%	13		
Errors in Recruiting	66.7			12
Errors in Coaching Style	16.7			3
Other Sources	33.3%	6		
Other Sources – Coaches			22.2	4
Other Sources - Athletes			22.2	4

Table 2. Percentage and Frequency of Impression Cue Dimensions and Related Higher Order Themes Comparing Individual/Dual and Team Sport Coaches

Dimension	Individual/Dual		Team	
Higher Order Theme	%	n	%	n
Personality	100	10	100	8
Work Ethic	90	9	75	6
Team Qualities	60	6	100	8
Mental Strategies	80	8	50	4
Coachability	40	4	38	3
Character	30	3	50	4
Confidence	10	1	25	2
Performance	100	10	100	8
Quantitative Aspects of Coaching	100	10	75	6
Sport Specific Skills	50	5	88	7
Motor Skills	80	8	88	7
Athleticism	20	2	50	4
Personal	80	8	88	7
Maturation	80	8	63	5
Family	40	4	38	3
Cognitive	50	5	88	7
Academics	50	5	75	6
Tactics	10	1	50	4
Mistakes	80	8	63	5
Errors in Recruiting	80	8	50	4
Errors in Coaching Style	10	1	25	2
Other Sources	40	4	25	2
Other Sources – Coaches	30	3	13	1
Other Sources - Athletes	30	3	13	1

PERSONALITY AND PERFORMANCE DIMENSIONS

The majority of data was expressed through the Personality and Performance dimensions. All of the coaches made reference to both personality and performance factors when explaining their modes of assessing athlete ability. This general finding lends support to the previous slant of expectancy research in the prioritization of performance factors as the targeted impression cue [13-15]. Considering that it is more difficult to "see" personality factors when viewing athletic performance, it is logical that coaches rely on visible physical aspects when scouting and evaluating athletes such as speed, strength, and footwork.

Recall that 42% of the raw-data quotes referred to personality aspects for assessing athlete ability. This finding reinforces the recent work of Solomon [22] who expanded expectancy

theory to include personality factors. These results also suggest that it would be advantageous for the researcher and practitioner to note the significance of personality factors and determine methods for identifying those qualities in athletes.

The researchers made a concerted effort to identify those qualities associated with varied personality factors through a qualitative analysis. The information gleaned from this process helped us delve into the meanings of each of the personality higher-order themes. This select group of coaches used terms such as work ethic, coachable, character, and confidence. Among these, work ethic was the most frequently cited higher-order theme. From this investigation, it appears that key elements of work ethic include being a hard worker, having high aspirations, being disciplined, and competitive. This is a first step in defining the vague term of work ethic. Refer back to Figure 1 for a detailed listing of the Personality dimension higher- and lower-order themes. We hope to be able to use this information to catalog and operationalize personality factors to complement the evolution of expectancy theory and to facilitate coach education on such matters.

Note that only three coaches recognized the personality factor of confidence as an important aspect of assessing athlete ability; it was the least often cited psychological cue. This is puzzling considering that one of the most consistent findings in the sport psychology literature shows a linear relationship between confidence levels and performance [32-35]. Although confidence was not often cited in the present study, the important point is that it was recognized as a factor used for assessing athlete ability. At this point, we are primarily interested in developing a multifaceted tool which allows for the expression of sources utilized to judge athletic ability. Clearly, the current study supports the supposition that confidence is an impression cue which coaches consider in their analysis of athlete ability, but it is not the only personality impression cue used [22].

OTHER DIMENSIONS

While Personality and Performance dimensions dominated the resultant outcomes of this investigation, four other dimensions merit discussion. Personal cues expressed in expectancy theory typically include such demographic features as age, ethnicity, and gender [9]. Those features were not evidenced in our sample of intercollegiate coaches. Instead, we identified two personal cues that we labeled maturation and experience. While there may be an indirect link between age and experience, this was not the view expressed by the coaches.

A new dimension, elicited by 12 of the 18 coaches, was labeled Cognitive. This dimension included factors related to knowledge. Considering that intercollegiate athletics takes place in an academic setting, the weighting of academic knowledge appears logical for coaches. In order for athletes to compete, they must be academically eligible. However, this factor appears to play a more indirect role in the assessment of athlete ability. The other theme, tactical knowledge of the sport, plays a more direct role in the coaches' estimation of athlete achievement.

Thirteen coaches identified mistakes they had made in the process of assessing athletes. The majority of commentary aired concern over mistakes in recruiting. Recall that many coaches rely heavily on performance factors when scouting potential athletes. The current sample of coaches articulated that conducting incomplete assessments of athletes during the recruiting process has led to errors. We may be able to further understand these errors in recruiting if we are able to facilitate the quantification of other impression cue sources, such as psychological and performance cues, which may allow for more complete assessments.

The dimension labeled Knowledge from Others refers to utilizing information provided by others in the sport context for athlete assessment. Six of the coaches offered details

regarding information garnered from other coaches and players who know the athlete undergoing assessment. This was articulated in a manner that indicated a positive valuation of the opinions of others in concert with the coaches' own perspectives. Clearly, evaluating athletes in terms of ability and achievement is not a unidimensional process. Gaining assistance from others served to facilitate sound decision-making according to those interviewed.

EXPECTANCY FORMATION
From the preceding results, there is evidence to suggest that the translation of expectancy theory into the realm of athletics has been stunted. Recall that the first step in the expectancy cycle involves the coaches' initial assessment of athlete ability via the utilization of impression cues [8, 9]. The self-fulfilling prophecy cycle begins when coaches use specific sources of information to generate their expectation of athlete ability. Until recently, these impression cues were limited to performance and personal cues. The addition of personality cues added to the base of information upon which coaches use to inform their expectations [22].

TYPE OF SPORT
A void in the expectancy theory empiricism is the exclusion of individual/dual sport participants [22]. A secondary purpose of the current study attempted to assuage this breach and include both team and individual/dual sport coaches in the sample. While college athletics boasts a "team" atmosphere and concept in its individual and dual sport programs via scoring procedures, they clearly differ in the amount of player interaction during competition. The goal of this project was to have a balanced sample of these two types of sports. Unfortunately, that goal was not reached but we were able to include 10 individual/dual coaches and eight team sport coaches.

Upon examination of the findings, there are some obvious similarities across both groups and also some unique differences. The similarities elucidated include those aspects which all coaches valued or found to be salient when assessing athlete ability. Logically the vast majority of coaches, regardless of sport type, valued the use of quantitative assessment tools to evaluate athletes; basic motor skill ability such as strength, coordination and speed; a solid work ethic: and benefits of the maturational process.

The differences uncovered reveal the unique aspects of coaching individual/dual versus team sports. For instance, all of the team sport coaches expressed valuation of team qualities such as team chemistry and role acceptance. However, only 60% of the individual/dual sport coaches voiced the significance of team qualities as a viable source of assessment. This is quite logical considering the interdependence required of athletes necessary to play well as a team.

Eight of the ten individual/dual coaches assessed athlete's mental strategies (i.e., handling pressure, concentration) while only 50% of team sport coaches mentioned this theme. During individual/dual sport events, the athlete has only him or herself to rely on. The coach may perceive that the athlete must be equipped to manage the game independent of others, including the coach. Interestingly, tactical knowledge was another theme that evidenced distinct patterns between coach groups, but in opposition to the mental strategies described here. Half of the team-sport coaches reported this factor compared to only one individual/dual sport coach. This demonstrates that coaches clearly distinguish between strategic components of the game and the mental strategies a player may possess in competition.

Another distinction evidenced by team sport coaches is the weight of sport-specific skills. Seven of the eight team sport coaches recognized the importance of possessing skills unique to a given sport such as shooting free throws in basketball and batting in baseball. Only 50% of the individual/dual sport coaches cited this theme. Reasons for this remain open to speculation at this juncture.

PRACTICAL APPLICATION

Considering the exploratory nature of the current study, any form of practical application must be approached in a conservative manner. Upon further evaluation and testing of expectancy theory in general and expectation formation in particular, the findings may serve to facilitate the training of coaches. The development of expectations in achievement settings is a natural cognitive process. What may be helpful is to assist coaches in identifying the primary sources of information used and the efficacy of those sources. Another issue that emerges from this study beckons back to previous literature on the inflexibility of coach expectations. Studies conducted at both the high school [17] and college [19, 36] levels found that coaches are inflexible in their expectations of athletes. In other words, first impressions were extremely powerful and rarely did coaches re-evaluate their initial expectation of athlete achievement. The results of this study reinforced this premise in the Mistake dimension; coaches admitted their lack of completing assessment as an error. Therefore, the themes may offer an array of options for coaches to exercise so that they do not get caught in a "Pygmalion-prone" cycle. When one understands the volume of sources available to evaluate athletes, this might minimize the lack of regular assessment and re-evaluation of athlete ability.

FUTURE DIRECTIONS

A noted gap in previous expectancy literature is the failure of researchers to ask a basic question "How does the expectancy cycle relate to actual performance?" Solomon took note and conducted two studies attempting to answer this question [22, 37]. Analogous to this gap is a parallel one targeted in the current study. The major purpose was to determine impression cue sources used by coaches to assess ability and achievement in athletes. A next logical step is to identify whether the cues used most often, specifically some of the themes located in the Personality and Performance dimensions, are effective in assessing ability. We know that coaches are fairly inaccurate in their recall of feedback issued to athletes [15, 38]. Are they using the most effective and accurate techniques in assessing ability? Furthermore, is the utilization of these cues facilitating player development? Here it is suggested that we take the challenge proffered by Solomon [22, 24] and begin to link cue utilization to actual athlete performance.

Another goal of this research is to develop a quantitative instrument for both research and program development. It would be much easier to attempt the research challenge proposed above if one could survey coaches in a more efficient manner. This would allow researchers to readily access sources of expectancy information among college coaching staffs.

CONCLUSIONS

Using the words of coaches, the current study has continued the expansion of expectancy theory by both verifying the utilization of the three accepted impression cues and adding to the list of impression cues. The time is ripe for a reinterpretation of expectancy theory in sport and the acknowledgment of the vast array of information sources used by coaches in their assessment of athlete ability and achievement.

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