

Psychological implications of puberty in dance

This information sheet is Part 2 of a two-part series dedicated to the adolescent dancer. Part 1 deals with the physiological changes puberty brings for young dancers and implications for training and performance.

Puberty is a developmental stage associated with marked changes in human drives, rapid changes in hormone levels, psychology and social life (Blakemore, Burnett, & Dahl, 2010; Rosenfield, 1991; Tanner, 1962). As someone who works with young dancers you will observe noticeable changes in how children, think, feel, and react to others as they enter puberty. You will also see differences in what motivates and interests them. It is important to acknowledge that the physical changes of puberty comprise just one set of maturational processes within the period of adolescence; **adolescence** spans the development of cognitive, emotional and social competencies. The term development describes an increase in competence across a number of interrelated domains including social, intellectual, cognitive and emotional competence (Malina et al., 2004).

Psychological development is composed of both cognitive and emotional components.

Cognitive development i.e. how an individual perceives and rationalises things, is related to age and experience, rather than physical maturation; skills such as planning, logic, reasoning, inhibitory control (control of attention and motor responses), understanding consequences and problem solving are not directly linked to puberty and can continue developing into the early twenties (Dahl, 2004). This disparity in timing between the physical and cognitive development can create vulnerability for the young dancer: while a dancer may be physically and sexually mature, with regard to the brain and the body, they may be relatively immature in terms of self-control and the ability to regulate feelings (Dahl, 2004). This disconnect can leave young dancers at risk of developing behavioural and emotional problems, as they try to master strong emotions and complex social situations and behaviours such as sensation seeking and risk taking. Girls who enter puberty at an earlier age are, from a cognitive and socio-emotional perspective, less prepared to deal with the increased pressures and expectations that adulthood bring (Sherar, Cumming, Eisenmann, Baxter-Jones, & Malina, 2010). As a consequence, early maturing girls are, as a group, are more likely to engage in maladaptive coping behaviours and/or health risk behaviours, such as smoking and drinking.

Emotional developments also take place throughout adolescence. Puberty increases desire for specific types of emotional experience, particularly arousal and excitement (Dahl, 2004). A young dancer may seek out experiences such as pushing the boundaries of their physical capabilities in dance, or pursuing new activities altogether unrelated to dance as these appear fresh and exciting. This development has the potential to create both vulnerability and opportunity. Vulnerability created by seeking out these high-intensity feelings through reckless behaviour and opportunities created through harnessing these emotions to work towards positive goals (Dahl, 2004).

The context of dance

While the physical changes experienced during puberty necessitate changes to psychological aspects such as perceptions of self, young dancers must contend with these basic adaptations within a context which subjects them to amplified risk. For example, while individuals are at a high risk of

developing eating disorders at adolescence, experiencing adolescence within the context of dance amplifies this risk (Arcelus, Witcomb, & Mitchell, 2014; Brooks-Gunn & Warren, 1985; Klump, 2013).

In a study comparing dance and non-dance students, the social context of dance has been found to amplify detriment to psychological wellbeing associated with puberty. Adolescent dancers reported higher incidences of disordered eating, more negative body image and lower self-esteem compared to their non-dancing counterparts (Brooks-Gunn & Warren, 1985).

➔ Many psychological issues such as disordered eating begin at adolescence; how young dancers adapt to physical and social changes at puberty can set the foundations for long term psychological wellbeing.

Dance, as a form of physical activity, has the potential to cause both harm and benefit to the individual. Recreational dance is associated with more positive psychological outcomes such as greater self-esteem and more adaptive motivation, which promotes positive and sustainable involvement in dance (Quin, Frazer and Redding 2007). While vocational dance training has the potential to foster similar health benefits but also exposes young dancers to additional risk for both physical and psychological wellbeing (Buckroyd 2000). Factors which may serve to generate more negative effects in vocational training include greater exposure to high pressure environments, potentially negative learning experiences/environments and expectations for physique and performance level (Annus & Smith, 2009; Buckroyd, 2000). When we consider this alongside the cognitive and emotional developments described above, the adolescent dancer is highly vulnerable to developing problem behaviours and psychological wellbeing is at risk.

Impacts on the Dancer

The potential for these pubertal changes to impact upon psychological wellbeing, dropout and participation in physical activity may be greater in contexts such as dance where there can be high pressure to conform to a particular size and shape and to adapt quickly to physical changes. In the context of dance, positive or negative perception of changes may be influenced by when they mature in relation to their peers and the extent to which they meet the social and physical demands of dance. How these changes are experienced and interpreted by a young dancer can be significant in determining positive or negative health outcomes.

Psychological wellbeing

How well a young dancer adapts to changes at puberty is a key determinant of subsequent psychological wellbeing (Ackard & Peterson, 2001; Summers-Effler, 2004; Tremblay & Frigon, 2005; Tremblay & Lariviere, 2009; Yuan, 2012). Research holds that girls are at greater risk in comparison to boys, with girls reporting more peer pressure to lose weight, more negative comments about weight and appearance and experiencing more long term symptoms (Tremblay & Lariviere, 2009; Yuan, 2012). Key issues for female adolescents include negative body image, low self-esteem, reduced physical self-concept, depression and disordered eating (Brooks-Gunn & Warren, 1985; Cumming et al., 2011; Tremblay & Lariviere, 2009; Yuan, 2012). While, for girls, body satisfaction tends to decrease with age, for males it tends to improve. In general, boys tend to experience either a limited short-term effect or a positive influence on their psychological wellbeing as a result of physical changes at puberty (Yuan, 2012, 2007; Angold et al, 1998).

Dropout

Research suggests that most adolescent girls do not achieve sufficient physical activity levels for health, particularly when compared to their male counterparts (Fawkner, Henretty, Knowles, Nevill, & Niven, 2014). There are many reasons why adolescence may present a period where girls choose to reduce participation in physical activity, for example, the increase in body fat percentage and changes in body size and shape which are experienced by girls during maturation may not be conducive to performing physical activity (Malina et al., 2004).

Dropout rates in dance training are high compared to other forms of physical activity with estimates of 53% and 55% in longitudinal studies of young dancers (Hamilton, Hamilton, Warren, Keller, & Molnar, 1997; Walker, Nordin-Bates, & Redding, 2012). Although factors associated with dropout vary with dance style and level of performance, puberty is consistently identified as an interval during which risk of drop out is increased. For girls, early menarche and greater breast development have been associated with drop out from dance training (Hamilton, et al., 1997), while later onset of menarche was associated with more successful adaptation to ballet training among dancers aged 14-18 years (Brooks-Gunn & Warren, 1985; 1989).

Research in youth sports has shown that coaches and instructors who adopt positive and adaptive teaching behaviours report lower dropout rates and higher enjoyment and self-esteem from young athletes (Cumming, Eisenmann, Smoll, Smith, & Malina, 2005; Smith, Smoll, & Hunt, 1977; Smoll & Smith, 2002).

Positive teaching behaviours include

- ➔ Reinforcement (for effort as well as for good performance)
- ➔ Mistake-contingent encouragement (Encouragement given to a dancer following a mistake)
- ➔ General encouragement (Spontaneous encouragement that does not follow a mistake)
- ➔ Corrective instruction (given in a supportive manner)
- ➔ Technical instruction (spontaneous instruction in the skills and strategies of dance)
- ➔ Focus on enjoyment and effort

(Smith et al., 1977)

Negative coaching behaviours, such as punishment, failure to respond to good performance or effort, ignoring mistakes, punitive instruction and regimenting behaviours aimed at keeping control, result in lower perceptions of competence, greater anxiety, and less enjoyment of sport and greater levels of drop out (Cumming et al., 2005; Smith et al., 1977; Smoll & Smith, 2002).

The timing of maturation i.e. whether an individual matures in advance, on-time or in delay of their peers, can play a significant role in continued participation and associated health implications (Cumming, Sherar, Gammon, et al., 2012; Fairclough & Ridgers, 2010; Jackson et al., 2013; Sherar et al., 2010). Girls who mature in advance of their peers generally experience greater gains in fat mass during maturation. Greater gains make these individuals more susceptible to a range of negative psychosocial outcomes such as negative body image, disordered eating, low self-esteem and more negative perceptions of self within environments that accentuate peer comparison and thinness (Brooksgunn, 1988; Brooksgunn & Warren, 1985; Sean P. Cumming et al., 2012).

There are many reasons why a young dancer may dropout of dance classes in addition to the changes of puberty, such as the timing of puberty and increasing school demands. In order to provide the best support for young dancers, it is important to understand the factors that contribute to dropout and how we can work to minimise it.

Consider the environment you provide and how you include the following...

- ➔ Support for young dancers of differing maturity - modifying the content or environment of your classes to support them
- ➔ Positive teaching behaviours – how you can emphasise these more within your teaching practice

physical, cognitive and social changes experienced during puberty and adolescence necessitate changes to these perceptions of self and can effect their development (Blyth et al., 1985; Brinthaup & Lipka, 2002).

Perceptions of the self are developed through two main sources, direct appraisals and reflected appraisals (Sebastian, Burnett, & Blakemore, 2008). Direct appraisals are based on an individual's reaction to past experiences and events e.g. reflecting on a comment made by a dance teacher or peer; while reflected appraisals are based on an individual's beliefs about how they are seen by others e.g. feelings generated by self-comparison of body size/shape with peers and assumptions of peer evaluations of the body based on initial self-comparisons (Sebastian et al., 2008).

Direct and reflective appraisals are increasingly important during adolescence, a point when self and social comparison becomes more influential; adolescents begin to compare their performance to their own past and to their peers (Brinthaup & Lipka, 2002; Sebastian et al., 2008). At this point adolescents begin to understand that others are making comparisons and judgements about them and subsequently place higher value on these judgements and comparisons (Sebastian et al., 2008). This awareness of own perceptions of self and the perceptions of others can be reflected in some typical behaviours displayed at adolescence, such as heightened self-consciousness and susceptibility to peer influence (Forbes & Dahl, 2010; Sebastian, Burnett, & Blakemore, 2008). Positive perceptions of the self are associated with greater psychological health and wellbeing while negative perceptions are associated with issues such as depression and anxiety (O'Dea & Abraham, 1999; Sebastian et al., 2008).

The role of the teacher

How pubertal changes are perceived by significant others within a dancers social context has the potential to influence psychological wellbeing. The 'value' of specific pubertal changes may vary depending on the context; the connotations associated with specific changes within that context may influence how changes are responded to (Petersen et al., 1980). For example, external physical changes, such as an increase in weight, height or breast development, may have more immediate social value to a young dancer and are also likely to have a different significance to the individual and to her social network than less visible changes (Petersen et al., 1980). With the social context playing an important role in healthy psychological adaptation at puberty, the dance teacher has the potential to play a significant role.

The perceptions and reactions of significant figures such as the dance teacher have been shown to play a role in shaping social expectations regarding the body and pubertal changes (Petersen et al.,

1980; Pickard, 2013; Tremblay & Lariviere, 2009; Yuan, 2012). Dance teachers can utilise different approaches to promote psychological wellbeing. Awareness of external expectations and individual aspirations and of strategies to make the pubertal transition less stressful for adolescent dancers may enable teachers to create training/learning environments that are more supportive and protective of physical and psychological health (Mitchell, Haase, Malina & Cumming, 2016). Examples of teacher actions to moderate the effects of puberty include indirect approaches such as covering mirrors to divert focus from the body and direct approaches such as discussing pubertal changes openly with students (Mitchell et al., 2016).

Teachers in various dance contexts can work to optimise the development and psychological wellbeing of young dancers through creating more adaptive learning environments through positive teaching behaviours and a combination of direct and indirect actions to make the pubertal transition less stressful.

- i. Cues and comments focus on positive messages and how movements feel as opposed to what the body should look like
- ii. Raise awareness amongst dancers and their parents about the normal and temporary changes associated with maturation
- iii. Create a protective environment using direct and indirect actions such as reducing use of mirrors and guiding dancer aspirations toward appropriate dance pathways.

To help young dancers adapt positively at adolescence and to develop a more positive sense of self, dance teachers can work to...

- Avoid the use of comments which compare one student to another, and otherwise try to create a *positive motivational climate*, which supports students' basic psychological needs. (See our information sheet on Motivational Climate for more information)
- Reduce the use of or focus on the mirror to help students to minimise comparison with others
- Be flexible about uniform during this time. This may be of particular benefit to young dancers who mature in advance of their peers and are adjusting to a changing body.
- Focus time and attention towards aspects other than technique, which may progress more slowly during this time, such as musicality, performance and strengthening. This can help students to build confidence and make progress in other areas.

In summary, the teacher has an important role to play in facilitating the most positive and adaptive transition through puberty. Young dancers place a high value on the comments and opinions of the teacher and these views can be very influential in determining how a young dancer perceives and adjusts to the changes of puberty. There are many ways in which the dance teacher can facilitate healthy responses in their students. These include indirect and direct approaches to try to mitigate any negative effects of puberty, such as covering mirrors, avoiding comparison and creating an open dialogue with students. For further discussion of the challenges of puberty, see the International Association of Dance Medicine and Science fact sheet: The Adolescent Dancer (Daniels, Rist & Rijken, 2001) which focusses on the growth spurt.

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