



The development of an instrument to measure women's experience of an aerobic dance class

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The purpose of the study was to pilot an instrument to measure women's experience in an aerobic dance class with regard to their descriptions of the general atmosphere, the music, the dance moves and routines, and the instructor. In addition, the participants were asked to rate a list of exercise benefits in order of personal importance. A sample of 27 women, ranging in age from 25 to 60 years participated in this pilot study. The women responded with positive endorsements for all aspects of the overall dance experience, but their most affirming descriptions revolved around the instructor. There was an almost unanimous agreement amongst the participants about the importance of the instructor's role in their experience of the class. Their responses to the open-ended questions supported these sentiments. The mental and physical benefits were rated as important for most of the women whilst a much lower percentage rated the social benefit as important. Two items in the semantic differential posed problems but the instrument showed promise in eliciting key aspects of women's experience in an aerobics dance class.

Die doel van die studie was om 'n instrument daar te stel wat die ervaring van vroue in 'n fiksheidsdans-klas meet: hulle ervaring ten opsigte van die algemene atmosfeer en die musiek, asook hulle opinie oor die dans-roetines en -bewegings en die instrukteur. Die deelnemers is ook gevra om 'n lys te maak van die voordele van oefening met verwysing na hulleself. 'n Steekproef van 27 vroue tussen die ouderdomme van 25 tot 60 jaar is in hierdie loodsstudie gebruik. Die vroue het positief gereageer op alle aspekte van die algehele dansondervinding, maar hul mees positiewe ervaring was gesentreer om die instrukteur. Verder was hulle opinie rakende die belangrikheid van die instrukteur se rol in hul ondervinding van die klas byna dieselfde. Hulle antwoorde op die oop-einde vrae het hierdie sentimente ondersteun. Die psigiese en fisiese voordele is as die belangrikste deur die meeste vroue aangedui, terwyl 'n veel laer persentasie die sosiale voordeel as belangrik beskou het. Afgesien van twee problematiese items in die semantiese differensiasie, het die instrument belofte getoon om sleutelaspekte van vroue se persepsies van 'n fiksheidsdansklas te identifiseer.

Introduction

Problem Statement

Given the role that physical activity plays in both physical and mental health and the lack of research on South African women's experiences of physical exercise, this study represents the first in a series of research projects which attempt to address the gap. The first phase involves the development of suitable measuring instruments to capture women's exercise experiences and motivation.

It is well documented that physical activity and physical fitness play a key role in physical and mental health. Various authors cite research that demonstrates the beneficial effects of exercise (Baranowski *et al.* 1992:237; Burgess, Grogan & Burwitz 2006:57; Edwards 2006:359–360; Hacker 2008:31; Hös 2005:141; Mutrie & Choi 2000:545; Smith 2006:198–199). In their attempts to demonstrate the effectiveness of exercise regimes and interventions in promoting physical and mental health, researchers generally rely on experimental methods:

- Bicego *et al.* (2006:1400–1403) review experimental studies that examine the effects of aerobic exercise on women with or at risk of, contracting breast cancer.
- Hös (2005:141–142) cites several studies that use experimental designs linking exercise and the health conditions of women.
- Stathopoulou *et al.* (2006:179–184) review 11 efficacy studies involving clinical populations.
- Young, Weeks and Beck (2007:1379–1381) applied the experimental method on postmenopausal women.



In relying on before-and-after designs or control-and-experimental group comparisons with set measures or assessments of improvement rates, investigators have generally neglected women's experiences of specific exercise modalities and the motivations that promote adherence to specific exercise formats. Anecdotal evidence of the link between physical activity, specifically dance, and health benefits is widely found (Brown 2006:28–29; Foltz–Gray 2006:130–135).

A gender bias is encountered in the literature: for example, although heart disease is a leading killer of women as well as men, most of the research on the link between physical exercise and health has been carried out on men (Mutrie & Choi 2000:549). Segar *et al.* (2002:339) also point out that women's participation in exercise has not enjoyed the same amount of research attention as men's participation. The authors cite research which indicates that women are more likely to report gender specific barriers to participation than men. These barriers may be the reason for women's low levels of participation in physical exercise. The popular choice of aerobics as exercise for women has met with some criticism. Early feminist literature reviewed in Craig and Liberti (2007:678–679) and Collins (2002:85–86) suggests that aerobics disempowers women because it emphasises physical appearance. The former cite more recent studies that demonstrate that, whilst the emphasis on appearance may still hold true, there is evidence that physical confidence and vitality benefits are also important for women. In Collins's (2002:105) study, the feminist aerobic exercisers emphasised their sensation of empowerment and enjoyment whilst downplaying the criticism that the activity is oppressive. Given the lack of research on women's positive experiences of aerobic exercises our intention is to embark on a project that examines women's experiences of these group exercises offered at health clubs. Daley and Huffen (2009:690) stress the importance of conducting research on exercise in a naturalistic setting such as a gymnasium or health club. The most common types of the various exercise modalities on offer at most modern health clubs are aerobic exercises, strength training and flexibility exercises. Group aerobic classes are offered mainly in the form of dance exercise classes and step aerobics.

As pointed out earlier, most studies with women have used experimental methods. In addition, apart from Blanchard's, Poon's, Rodgers's and Pinel's (2000:211–213) attempt to apply the Group Environment Questionnaire in an aerobics class setting, our review of the literature failed to uncover a measurement instrument that could be used to measure women's experiences of dance aerobic classes. The Group Environment Questionnaire was developed to measure group cohesion in sport settings. In our study the intention was to obtain women's ratings of various aspects of the dance class, the importance they attach to these aspects and the experienced benefits of this particular form of exercise using a basic measuring instrument. When we considered that past research has pointed to the role of several aspects of

the group exercise experience which include the importance of music (Priest & Karageorghis 2008:347), choreography (Bray, Millen, Eidsness & Leuzinger 2005:415) and the instructor (Evans, Cotter & Roy 2005:257), we attempted to integrate these elements in the instrument. Blanchard *et al.* (2000:212) observed that aerobic fitness classes have become a large industry focusing on training of instructors, music and choreography production. Bray, Gyurcsik, Culos-Reed, Dawson and Martin (2001:427) have pointed out that research on the influence of the instructor on exercise behaviour is limited. With these key concepts in mind, our instrument covered the general atmosphere in class, the music, the moves and routines, and the instructor; the personal importance of these elements to the women; their ratings of a set of physical and mental health benefits; and their suggestions for improvements.

Baker (1994:182–183) and Huysamen (1994:197–198) recommend the use of a pilot study to pre-test or '*try out*' a research instrument such as a questionnaire or interview schedule. This study made use of a convenience sample to pilot the questionnaire developed by us.

Research method and design

Design

We used a small-scale quantitative survey design to pilot-test the questionnaire which was aimed at measuring women's experience of a dance aerobics class.

Materials

The target population on which we plan to use the final questionnaire in a large-scale survey constitutes women that attend aerobic dance classes. A convenience sample of 27 women (ranging in age from approximately 25 to 60 years) participated in the pilot study. Fifteen were '*regulars*', five had been to the class several times before and the rest were '*first timers*'.

Context of the study

The aerobics dance class is offered at a local health club on a Friday morning at 08:00 and lasts one hour. The instructor prepares a different routine for each class, but the general format consists of the following: a warm-up of approximately 10 minutes; a routine that is introduced in four or five different sequences with the entire routine repeated several times, and a cool-down at the end. The dance moves are adapted from a range of different dance steps like the cha-cha, salsa, mambo and hip-hop. The moves require arm and leg coordination with movements in different directions around the studio. These include:

- *V-stepping* in which one foot is moved forward in an outward direction, then the other foot is moved forward also in an outward direction forming a V shape
- *Mambo* which involves placing one foot forward, rocking back on the other foot, then forward and back again
- *Grapevine*, in which you step to the side with one foot, move the other foot behind to cross and repeat the move before changing to the other side.



The instructor plays contemporary up-beat pop music, which she changes regularly.

Data collection methods

After brainstorming our ideas in group discussions amongst colleagues and examining the literature, we came up with several drafts before settling on a three-part questionnaire.

The dance class experience

The first part had four subsections or features with a closed-ended format. The subsections were aimed at assessing the following:

- general atmosphere (measured by four adjective pairs)
- music (measured by six adjective pairs)
- moves and routines (measured by eight adjective pairs)
- instructor (measured by seven adjective pairs).

We attempted to make the instrument as accessible as possible to our respondents by using Osgood's, Suci's and Tannenbaum's semantic differential method (Oppenheim 1992:236–241) for the first four subsections (*General atmosphere*, *Music*, *Moves and routines*, and *Instructor*) as well as a rating scale.

The semantic differential method consists of a stimulus word (e.g. music) or a statement followed by a set of bipolar adjectives or descriptive phrases usually separated by a seven-point rating scale. The scale points are either left open using seven dashes, or the numbers 1–7 are inserted between the opposite adjectives. Respondents are expected to indicate their attitude toward the stimulus object by making a cross along the continuum.

We chose to separate the bipolar adjectives or descriptive phrases with five dashes, as illustrated:

Boring _____ Stimulating

The respondents indicated with a cross (X) (on one of the dashed lines) the extent to which they agreed with the description: the closer the cross to the word, the stronger the agreement. For scoring purposes, the response closest to the positive adjective received a score of 5 through to 1 for the response closest to the negative word or phrase. In the block next to each word pair, the respondents were asked to indicate on a three-point scale the extent to which the issue (underlined) was important in the training session: '1' is *important*, '2' is *somewhat important*, and '3' is *not important*. When dealing with large samples, each respondent's total score is usually calculated to represent the attitude on that particular dimension. We tallied the responses rather than using the total scores seeing that this was a pilot study using a limited sample. We adhered to Osgood *et al.*'s recommendation as far as possible, as it is described in Oppenheim (1992:236) that the adjectives should cover three dimensions (evaluation, potency and activity). In assessing the moves and routines of the dance class, for example, we

used the following word pairs reflecting the aforementioned dimensions respectively:

- varied versus unvaried
- strong versus weak
- high energy versus low energy.

We followed the recommendations by Oppenheim (1992:237) and randomised the positive ends of the bipolar adjectives in order to avoid a response set. Al Hindawe (1996:8) stresses the importance of conducting a pilot study to test the adjectives used in a semantic differential scale.

Rating of benefits

We decided on a list of 11 group training benefits out of those that emerged from the brainstorming session, ranging from '*improving my physical health*' to '*managing stress levels*'. The respondents were asked to indicate the personal importance of each response in their expectations of the group training session. We used a 5-point rating scale with:

- '1' indicating that the benefit was '*very important*'
- '2' indicating that it was '*important*'
- '3' indicating that it was '*somewhat important*'
- '4' indicating that it was '*not so important*'
- '5' indicating that it was '*not at all important*'.

Open-ended questions

The open-ended question following on the rating was: 'Is there anything else you would add to this list?' The final question in the questionnaire was: 'If you had to change anything about this class, what would it be?'

A draft of the instrument was then circulated to the colleagues that participated in the original group discussion, for their comments on the face validity of the instrument. The number of descriptors was then reduced to: four items in *General atmosphere*, six items in *Music*, eight items in *Moves and routines* and seven items in *Instructor*.

Research procedure

We approached the health club management via the group training coordinator for permission to conduct the study. She discussed our request with the manager, who, in addition to granting us permission, generously arranged gifts of pens and chocolates for the respondents. In the weeks preceding the study, we announced our intentions to the class pointing out that participation was voluntary and that, whilst their collective impressions would be made available to the club, their individual responses would be kept confidential.

Data analysis

We obtained informed consent from each volunteer and they were told that they were free to withdraw at any time. The questionnaires were handed out after the class with the instructor's permission, and were completed and collected in under half an hour. The questionnaires were scored, the responses were tallied and the responses to the open-ended questions were summarised. The analysis of the results



was restricted owing to the small sample size. Besides the assessment of inter-item consistency, percentages and frequencies were used to summarise group responses to the questions.

Results

The results are presented in three parts that are named as Descriptors and ratings of the dance class experience, Ratings of benefits, and Responses to the open-ended questions.

Descriptors and ratings of the dance class experience

Cronbach's alpha was used to assess the internal consistency of each subscale, as well as the complete set of items: 0.63 (*General atmosphere*), 0.40 (*Music*), 0.84 (*Moves and routines*), 0.84 (*Instructor*) and 0.87 for the total number of items.

In order to facilitate scoring, we combined the responses at the positive end of the bipolar word pairs, that is, the '4' and '5' to form the *agree* category, the '3' to represent the 'undecided' category and the '1' and '2' closest to the negative end to form the *disagree* category. The responses on each of the scales (adjectives or descriptive phrases) were tallied. Whilst all the respondents ($n = 27$) completed the semantic differential segment of the questionnaire (which aimed to provide a description of the class) only 19 participants ($n = 19$) completed the ratings (in terms of importance to

them) for each characteristic of the exercise experience. This seemed to point to a problem in the layout of the questionnaire rather than a lack of cooperation on the part of the respondents. The results that referred to the various aspects of the class itself were based on all 27 respondents, whilst the rated importance of these aspects for the women was based on the 19 respondents who completed the ratings.

As seen in Table 1, the general pattern of responses to the adjectival pairs reflected high endorsement of the positive aspects of the dance class with just a few exceptions. Given that each of the subsections (*General atmosphere*, *Music*, *Moves and routines*, and *Instructor*) contained adjectives appropriate to the individual subsection, they could not be compared directly with each other. A significant observation, however, was the high level of agreement amongst the respondents on all the positive adjectives regarding the instructor. The overall findings indicated that, with regard to the instructor, the adjectives '*happy*', '*inspiring*', '*motivated*' were most important for the group (95% agreement). With regard to the general atmosphere, the '*fun*' and '*stimulating*' aspects were most important (89% and 95% agreement respectively). On the other dimensions of the dance experience, '*rhythmic*' music (84% agreement) and '*great beat*' (74% agreement) were most important. There was 68% agreement with '*creative*', '*high energy*' and '*varied*' as descriptors of the moves and routines.

Rating of benefits

The list of benefits were rated by twenty-six respondents and the results are summarised in Table 2.

Ten of the 11 benefits listed in Table 2 were rated as important for the sample as a whole with four benefits endorsed by the whole group. All the respondents said that the class was important for '*an energetic workout*', '*recharging my batteries*', '*improving my mental health*' and for '*clearing my head*'. The social reason of '*being with other women*', however, had the lowest consensus with less than half the respondents rating this aspect as important.

Responses to the open-ended questions

The responses to the open-ended questions about additional benefits covered a range of replies. These included the elements of fun and enjoyment, the '*feel good*' factor which sets the tone for the rest of the day, and the positive impact of the instructor's personality.

On the question of suggestions for change, six respondents indicated they would not change anything, three wanted more of the same on other days in the week and two wanted more of the same type of class.

In general they commented on the wonderful atmosphere, the excellent cool down exercises and their appreciation of the instructor's efforts.

TABLE 1: Frequencies of those that agreed with descriptions ($n=27$) and those rated them as important ($n=19$).

Features of class (and adjectives)	Agreed with description		Rated as important	
	<i>n</i>	%	<i>n</i>	%
General atmosphere				
Fun	27	100	17	89
Stimulating	27	100	18	95
Lively	27	100	16	84
Music				
Rhythmic	27	100	16	84
Great beat	26	96	14	74
Appropriate	26	96	12	63
Fast	19	70	7	37
Varied	18	66	10	53
Moves/Choreography				
High energy	25	93	13	68
Varied	24	89	13	68
Graceful	23	85	11	58
Strong	23	85	11	58
Fluid	23	85	8	42
Creative	21	78	13	68
Challenging	22	81	12	63
Sexy	19	70	7	37
Instructor				
Happy	27	100	18	95
Creative	27	100	17	89
Patient	27	100	17	89
Updated	27	100	16	84
Inspiring	23	85	18	95
Motivated	24	89	18	95
Friendly	26	96	17	89

n, Given as means of number.

**TABLE 2:** Frequencies of those that rated the benefits as important ($n=26$).

Benefits	Important		Some what important		Not important	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
An energetic workout	26	100	-	-	-	-
Being with other women	13	50	8	31	5	19
Improving my physical health	25	96	-	-	1	4
Forgetting about work/family responsibilities for a while	23	88	2	8	1	4
Recharging my batteries	26	100	-	-	-	-
Improving my mental health	26	100	-	-	-	-
Improving coordination	23	88	2	8	1	4
Getting energized	25	96	-	-	1	4
Managing stress levels	25	96	1	4		
Devoting time to myself/ Spending 'my' time	24	92	1	4	1	4
'Clearing' my head	26	100	-	-	-	-

n, Given as means of number.

Ethical considerations

Since the gym does not have an ethics committee, permission was granted by the gym management.

Validity and reliability

Cronbach's alpha was used to assess the internal consistency of each subscale as well as the complete set of items: 0.63 (*General Atmosphere*), 0.40 (*Music*), 0.84 (*Moves/Routine*), 0.84 (*Instructor*) and 0.87 for the total number of items. The first two subscales contain fewer items than the last two and these items maybe heterogeneous resulting in poor internal consistency values. Apart from assessing the instrument for face validity, in the absence of a suitable comparative instrument it was not possible to assess convergent validity.

Discussion

In Draper *et al.*'s (2006:99) survey of the fitness industry in South Africa, the employees at the various fitness facilities were asked to describe 'the most valuable employee in the fitness industry'. Their responses highlighted the importance of the interpersonal skills and personality traits of staff members. These included 'enthusiasm, a passion for the work, and the ability to motivate and communicate with others'. Dhurup, Singh and Surujlal (2006:46) also found that the 'personnel' dimension was the most important factor in patrons' evaluation of service quality in health and fitness centres. Although the present study was merely a pilot study, our findings supported widely held views on the importance of staff personality and people skills. The results indicated that the instructor played a pivotal role in the women's positive experience of the aerobic dance class. The closed and the open-ended responses confirmed this sentiment. Whilst all the respondents agreed that the instructor was happy, creative, patient and up-to-date, on average, 92% rated a 'happy', 'inspiring', 'motivated', 'patient', 'creative' and 'friendly' instructor as important in a group training session. The women also used the open-ended format to comment on the motivating qualities of the instructor. This appears to be a consistent finding in the literature. Evans, Cotter and Roy (2005:257) found that in addition to the physical fitness

of their instructors, their sample considered enthusiasm and motivation to be important characteristics. In their review, Greenleaf, McGreer and Parham (2006:190) mentioned that instructors have the power to influence exercisers through their attitudes and behaviour. Bray *et al.* (2001:427–433) cite research as well as provide evidence that suggests that the instructor plays a significant role in predicting attendance and in improving exercisers' confidence in their own abilities to perform strenuous exercises in a structured setting.

Even though the women responded positively to most aspects of the overall dance experience (*General atmosphere*), the 'fun' and 'stimulating' features of the class were rated as important by most of the participants. This was yet another key factor to consider because, as Petrofsky *et al.* (2008:186) pointed out, compliance in exercise programmes is also determined by the nature of the exercise; treadmill running, for example, is experienced as monotonous resulting in poor compliance. In the feedback interviews conducted with the respondents after their exercise and diet programme, the women in Petrofsky's study indicated that the 'fun' dance videos that they looked forward to, played a definite role in their adherence levels.

In an exercise class of this nature, music plays a critical role in women's enjoyment of the experience. It was not surprising therefore, to find that 'rhythmic' music with 'great beat' was rated as important by the majority of the women in the dance class. Priest and Karageorghis (2008:358) emphasised the importance of the rhythm of the music in their sample's exercise session whilst noting that music acted as a stimulus that resulted in exercisers who engaged in more strenuous exercise and who exercised for a longer duration. It is possible that rhythmic music serves to distract the exerciser from the physical strain and fatigue. Just over half of the group rated a 'varied' range of music as important. These findings suggest that the right kind of music, rather than a wide selection, has a role to play in boosting motivation levels of women during exercise.

Whilst most of the participants agreed that the dance moves or choreography used in the class was 'high energy', 'varied', 'challenging' and 'creative', these descriptors were not matched with corresponding ratings of their importance for the women themselves. The high energy aspect of the dance steps was rated important by about two thirds ($n = 13$) of the women in contrast with the 'sexy' moves that had the lowest endorsement in terms of importance. Apart from Bray's, Millen's, Eidsness's and Leuzinger's (2005:415–425) study of the effect of leadership style and choreography on enjoyment and exercise intention, very little research has been carried out on this feature of the dance exercise experience. They found that a motivationally enriched leadership style and varied choreography were linked with higher levels of enjoyment. Over two thirds ($n = 13$) of the present sample indicated that 'varied' dance routines were important for them.

The importance of 'energy' as a theme carried over into the sample's endorsement of the benefits of the class with



the results of *'an energetic workout'*, *'getting energised'* and *'recharging my batteries'* were important outcomes for all the respondents. Puetz, Flowers and O'Connor (2008:167–170) provided evidence of the beneficial effects of exercise on a sample of sedentary adults reporting persistent feelings of fatigue, that is the exercise boosted feelings of energy and decreased fatigue. The finding that *'being with other women'* was rated important by half the sample ($n = 13$) contradicts Paulson's (2005:238) finding on the role of *'togetherness'* as a benefit of the dance exercise group in her study. The difference could be a function of differences in age in the respective studies, for whilst Paulson's *'dance exercise'* group ranged in age from 60–89 years, most of the women in our study were in their forties. *'Social'* benefits were also found to feature strongly in Peltzer's and Pengpid's (2006:65) factor analysis of the perceived benefits of exercise in a sample of Black South African university students as well as in Murrock's and Gary's (2010:467) review of the research on the social benefits of participating in a dance programme. Blanchard *et al.*'s (2000:221) observation that the typical aerobics class did not involve much interaction amongst participants might be a more fitting explanation of our finding.

An interesting omission from the additional benefits of exercise for this particular group of women was the issue of weight loss. Even though weight loss is often mentioned in research as one of the benefits of exercise (Mutrie & Choi 2000:545; Bulley, Donaghy, Payne & Mutri 2009:758), none of the women in the present study mentioned this in relation to their own experience. Segar's, Jayaratne's, Hanlon's and Richardson's (2002:289) interpretation could be applied in this context as most of the women were *'regulars'*. Exercise is often promoted as an intervention associated with disease prevention and weight loss and is therefore perceived as something women *should* be doing. This approach hinders motivation and participation. They maintain that there is a better chance of involvement if exercise is promoted to women as a way of improving and enhancing quality of life. In an interview reported by the University of Michigan News Service, Michelle Segar (2008:2) said that women were more likely to embrace exercise if *'it nurtures them, not depletes them'*. Her research (Segar, Eccles & Richardson 2002:281–291) demonstrated that women who were keen to maintain overall well-being were more likely to keep on exercising than women who were trying to lose weight. None of the women in our sample indicated that the dance form of exercise was drudgery or something that they *'had to do'*. Their responses on the scale items and the open-ended questions indicated that feelings of well-being – physical and mental – were the most important benefits of the dance class.

We can sum up that, although this study was conducted on a small sample in a single health club, our basic measurement instrument enabled us to underline the critical roles of the instructor and the style of music – both aspects have good support from the literature – and to a lesser extent, the role of the choreography in these women's overall aerobic dance experience. In endeavouring to persuade more women to attend fitness facilities or to take the importance of physical activity in health promotion seriously, stakeholders need to

pay attention to those facets of the exercise experience that attract and motivate women to participate. In promoting dance as a form of exercise, Bremer (2007:166) pointed to the relatively low cost involved in improving the physical, mental and social lives of the public through this exercise modality. Mutrie and Choi (2000:549) and Segar *et al.* (2002:339), however, cited research showing that most women have no time to exercise because of family duties and responsibilities. Public health and health promotion practitioners face a real challenge in prioritising exercise as a critical physical activity in women's health, because of the need to empower women to take control of their health in this way whilst there is still a strong societal expectation that they should put others before themselves.

Conclusion

As pointed out by Van Teijlingen and Hundley (2001:1), pilot studies help to identify whether proposed instruments are inappropriate or problematic; this small-scale project enabled us to examine the suitability of the word pairs for the different dimensions of the exercise experience. Amongst the more problematic pairs were *'too loud'* versus *'too soft'* (with regard to the volume of the music) and *'predictable'* versus *'unpredictable'* to describe the general atmosphere. Al-Hindawe (1996:4) argued that one of the weaknesses of the semantic differential lay in the fact that it is not always apparent if the trait is positively or negatively valued. These seemingly confusing items and the inadequate number of items in the latter subscale were probably responsible for their low internal reliability coefficients (0.40 and 0.63 respectively). The internal consistency of the moves (0.84) and instructor (0.84) subscales, however, were much more promising. If minor changes are made to the layout (specifically a separation of the semantic differential and the rating scale), if problematic items as mentioned above are excluded, and if additional word pairs in the semantic differential are used, the instrument has the potential to be a useful measure in similar research. Although no problems were reported in understanding the instructions accompanying the questionnaire, one of the respondents summed up her experience with the following:

'This is too much analysis for me. I just do it because I enjoy it and need some exercise!'

(Respondent)

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Authors' contributions

M.I.K. initiated the idea for the project. Both C.P. and M.I.K. conceptualised the design, constructed the scale and collected the data. C.P. was responsible for the data analysis, interpretation of the findings and for the writing up of the manuscript.



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