

## THE MOTIVATION FACTORS TO PARTICIPATE IN PHYSICAL ACTIVITY (PA) AMONG PERSONS WITH HEARING IMPAIRED

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**Abstract:** *The involvement among person with disabilities (PWD) in physical activity related to the health and social benefits. The benefits are such as to develop some new skills, the opportunity to meet new friends and also to increase the confidence level among them. Thus, the purpose of this study is to determine the motivation factors to participate in physical activity among persons with hearing impaired ability. A total of 100 (n=100) persons with hearing impaired (male N=50, female N=50) aged range from 13 to 25 participated in the study. Motivation for physical activity was assessed by 40-items of Physical Leisure and Motivation Scale (PALMS) which measured eight motives developed by Molanourouzi, Khoo and Morris (2014). Statistical Package for the Social Sciences (SPSS) version 21 was used to analyze the descriptive and inferential data. The Independent T-test was used to measure the motivation level and difference motivation factor between the male and the female participants. The Cronbach alpha was used to check the Internal Consistency of the PALMS. Results revealed the female and the male participants had different motivation factors to participate in physical activity. Five highest motivations among the male are enjoyment (4.62±0.714), mastery (4.60±0.495), psychological condition (4.40±0.495), affiliation (4.30±0.544) and physical condition (4.20±0.606). The female tends to competition / ego (4.78±4.122), physical condition (4.52±0.614), enjoyment (4.48±0.609), mastery (4.48±0.646) and affiliation (4.36±0.631). There was no significant different on motivation between the genders among the person with hearing impaired ( $t(98) = -1.14, p > .05$ ). It can be concluded that a person with disability can reduce his or her negative perception when participating in physical activity.*

**Keywords:** *Motivation, Physical activity, Hearing impairment, PWD, PALMS.*

## **Introduction**

Cardiovascular exercise is vital to hearing health as one ages. A person over 50 years old without a genetic predisposition to hearing loss and who engages in aerobic-related activity for 20-30 minutes five times a week is more likely to maintain a healthy auditory system than someone with low cardiovascular activity level ((Alessio & Hutchinson 2003). The general benefits of attaining cardiovascular health through aerobic exercise are fairly well recognized. What isn't well recognized is that cardiovascular health and physical fitness are also positively correlated to a better hearing ability. Study demonstrates that with increasing levels of cardiovascular health will also help in increasing levels of hearing sensitivity (Alessio & Hutchinson 2003).

Several psychological variables have been identified as causal factors for physical activity participation. One element that has received most attention in sport and exercise domain is motivation (Roychowdhury, 2012, 2018). Motivation for physical activity is often measured by asking about its benefits; there is no consistent way of categorizing items, and often an "intrinsic motivation" category has been used (Diehl, Fuchs, Rathmann and Hilger-Kolb 2018). People who involve in physical activity in their life have a better health and social benefits than those who are not. This is also true with persons with disabilities, where they need to improve their health and skill components through performing various activities (Richardson, Smith, & Papatomas, 2017). Hearing loss is the fourth leading cause of disability worldwide, and an estimated 80 percent of affected individuals live in low- and middle-income countries. Prevalence estimates of hearing impairment among children and young adults in South Asia range from 14 to 28 percent of the population (Emmett et al. 2018).

Family are the most important circle of people that can encourage the persons with disabilities to be active in sport and to engage with the social relationship with the community (Karakas & Yaman, 2014). Shapiro & Martin (2014) did reveal that close friends can be the motivational factor in sport participation through recognition of performance, companionship and supportive. Persons with disabilities are facing many problems when associating with other people that lead them not to participate in physical activity. Shyness, helplessness, lack of ability and feeling inadequate are some of unwanted reasons that lead to this case. The concept of motivational (Cottingham et al., 2014) is a problematic especially to them, because they do not know how to motivate their own selves in engaging in physical activity and for that they need help from the surrounding in this matter. When the element of motivation are not adapt in their daily life, they tend to have a low self-confidence level to do anything including participate in physical activities (Karakas & Yaman, 2014). In relation with motivation, the persons with disabilities must set their intention to engage in physical activity. To develop the intentions, they must have a risk perceptions, always be a positive thinker and have high of self-efficacy (Perrier, Shirazipour, & Latimer-Cheung, 2015). The persons with disabilities must motivate their self to get involve in physical activity and have the eagerness to learn the new skill, for example they must have a confidence in playing the wheelchair basketball. In addition, there are two types of motivation that influence the persons with disabilities such as the intrinsic motivation which refers to solely feel interesting and enjoyable when involve in physical activity, while the extrinsic motivations are things like to earn money, reward or acquire certain competency level (Pan, Tsai, Chu, & Hsieh, 2011). Physical activities can help the persons with disabilities to mix with other persons whether with or without disabilities. Therefore, these can help themselves to get involve in sport and they feel like belonging to the community. They should dissolve the barriers that makes them unable to participate in physical

activity. For example such as lack of equipment's, facilities, low level of self-efficacy and lack of knowledge about the physical activities (Stancliffe & Anderson, 2017). The purpose of this study is to determine the different level of motivation to participate in physical activity among persons with hearing impairment.

## **Method**

This study used the survey study and casual-comparative design to determine the differences in motivation factors between the male and the female persons with hearing impairment.

### ***Sample***

This study consists of 100 (N=100) respondents (male N=50; female N=50). The respondents' ages are between 13 to 25 years old. Their ethnicities are Kadazandusun (47), Malay (24), Chinese (15), Indian (4) and others (10). The respondents have been categorized as a hearing impaired and has been diagnosed by the medical officer. They are being selected because they possess certain characteristics or satisfy specific criteria that suit the study. In addition, they have an identification disability card granted from Social Welfare Department and the Ministry of Health Malaysia. Most of them involved in track and field (42), bowling ten pin (12), and table tennis (4), netball (18) and petanque (24). Moreover, the respondents are active in sporting activities, where the school provides good facilities to make them involve in physical activity.

### ***Instrumentation***

This study used Physical Activity and Leisure Motivation Scale (PALMS) questionnaire develop by Molanorouzi, Khoo, & Morris (2014) . The main area of the survey concentrated on the demographical data. These questions assessed personal attributes of the participants including gender, age, race, education level and involvement in sports The PALMS questionnaire measured motives for participating in physical activity and leisure (Molanorouzi, Khoo, & Morris, 2014). The PALMS questionnaires that been used in the study consisted of 40 items measuring aspects of mastery, physical condition, psychological condition, affiliation, appearance, enjoyment, competition/ego and family/ friends expectation. Each factor consisted of five items, all scores are on a 5-Point Likert Style rated from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's Alpha for this PALMS are ranging from  $\alpha=0.78$  to 0.82 (Molanorouzi et al., 2014).

### ***Data collection procedure***

Permission had been granted for this study by the headmaster of the Sabah Society for the Deaf Kota Kinabalu, Sabah. The cooperation had been acquired from the teachers to assemble all the students in the hall. The questionnaires were distributed to the respondents together with stationeries to the students. An explanation had been conducted on the objective of the questionnaire, the procedures and on how to answer the questionnaire with the help from the teachers who used sign language to ensure they understand the questionnaire before answering it. After the explanation of the questionnaire, they were given 30 to 45 minutes to answer the questionnaire. They were given additional time if they could not complete the questionnaire within the time given. The questionnaires were collected after the all the students had answered the questionnaire completely. The study has been granted an approval by the faculty's ethical committee.

### ***Data analysis***

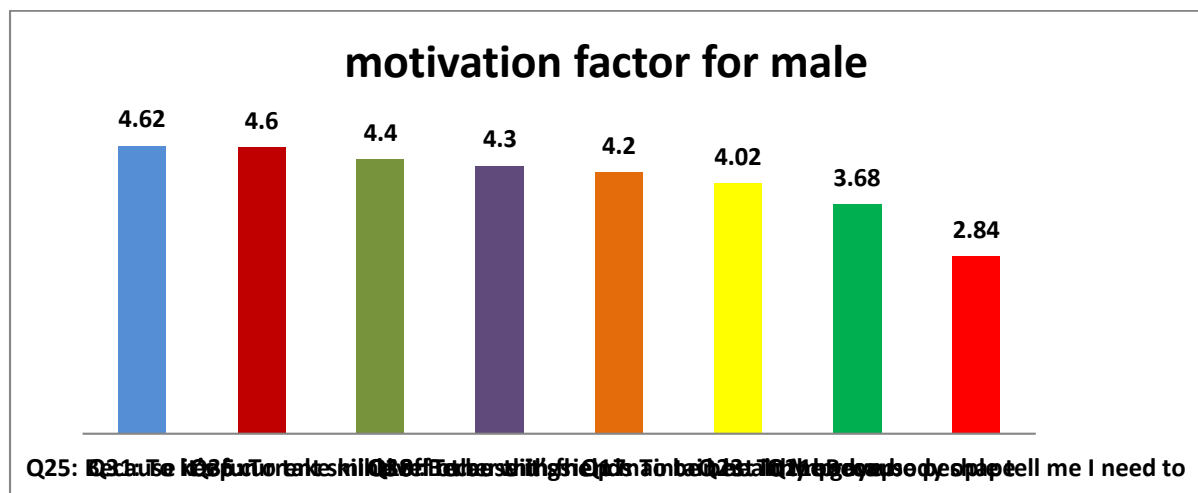
Statistics Package for the Social Science (SPSS) version 21.0 was used to analyze the findings. The descriptive statistics was analyzed by using percentage (%) and frequency for the

demographic profile, while the motivation questions were determined by means score (m) and standard deviation (sd.). The Independent T-test was used to compare the mean between the level of motivation of male and female respondents.

## Results

**Table 1: The Highest Motivation Factors For The Male Respondents To Involve In Physical Activity**

Domains	Items	Mean	SD
<b>Enjoyment</b>	Q25: Because it is fun	4.62	.714
<b>Mastery</b>	Q31: To keep current skill level	4.60	.495
<b>Psychological condition</b>	Q35: To take mind off other things	4.40	.700
<b>Affiliation</b>	Q38 : To be with friends	4.30	.544
<b>Physical condition</b>	Q10: Because it helps maintain healthy body	4.20	.606
<b>Competition / Ego</b>	Q17: To be the best in the group	4.02	.714
<b>Appearance</b>	Q23: To improve body shape	3.68	.741
<b>Family / friends expectation</b>	Q21: Because people tell me I need to	2.84	1.315



**Figure 1: The Highest Motivation Factor For The Male Respondents To Involve In Physical Activity**

Table 1 and Figure 1 show the highest motivation factors for the male to get involve in physical activities. The main factor for the males to get involve in physical activities is enjoyment which is Q25 “because it is fun” ( $4.62 \pm 0.714$ ). The male respondents feel the enjoyment when involve in physical activities, and this can motivate themselves to get into physical activities with open mind and adapt with their surroundings with other people. The second factor is “to keep current skill level” ( $4.60 \pm 0.495$ ) for mastery domains. It is important for the males to keep the current skill related to their sporting activities such as respondents who involve in track and field that need a level of technical ability. The third factor is Q35 “to take mind off other things” ( $4.40 \pm 0.700$ ) for psychological condition. Some of the respondents may have a problem at home such as with their family or friends. Some of the respondents may also be very sensitive

when people mention about their disability. In order to get over or take their mind off problems, they decide to get involve in physical activity.

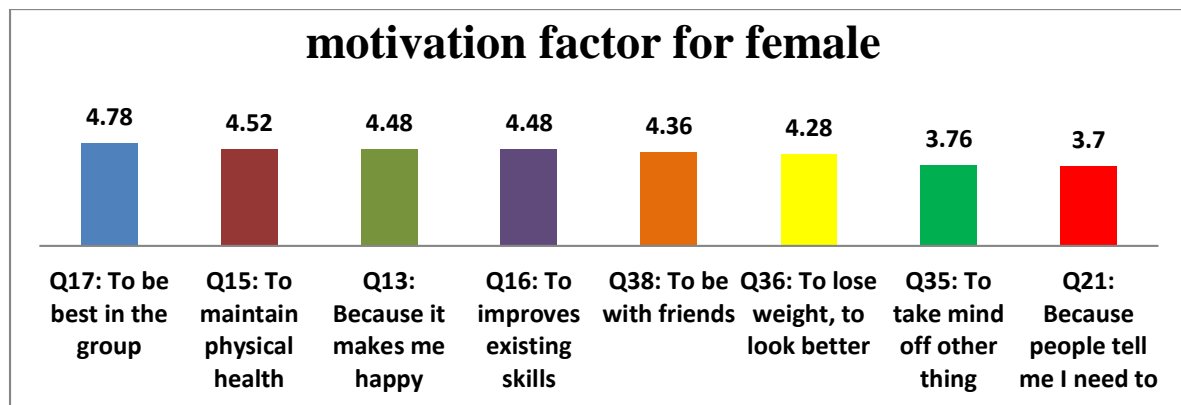
Next is the affiliation domains which is Q38 “to be with friends” (4.30±0.544). It is undeniable that friends can be the factor for the male respondents to engage in physical activities. When they are active in sport, they will have the chance to represent their school in some sporting events and through such participation, they will be able to meet new friends from different schools. The fifth factor is the physical condition domain which is Q10 “Because it helps to maintain healthy body” (4.20±0.606). When it comes to physically fitness or related to fitness level, it also determined by what they consume along with a proper exercise regime. Some of the male respondents mention that they will train every day in evening session after the school time, because most of them stay at the hostel.

The sixth motivation factor is Q17 “to be the best in the group” (4.02±0.714) for competition / ego domain. The male respondents have their pride to show to other people what they can do or achieve to gain recognition from others.

The seventh motivation factor is appearance domain which is Q23 “to improve body shape” (3.68±0.741). The male respondents are very fussy especially when involve their appearance as an athlete. The lowest mean among the eight domains is family/friends’ expectation domain which is Q21 “because people tell me I need to” (2.84±1.315).

**Table 2: The Highest Motivation Factors for The Female Respondents To Involve In Physical Activity**

Domains	Items	Mean	SD
Competition / Ego	Q17: To be the best in the group	4.78	.122
Physical condition	Q15 : To maintain physical health	4.52	.614
Enjoyment	Q13: Because it makes me happy	4.48	.609
Mastery	Q16 :To improve existing skills	4.48	.646
Affiliation	Q20: To do something in common with friends	4.36	.631
	Q38 : To be with friends	4.36	.631
Appearance	Q36: To lose weight, to look better	4.28	.701
Psychological condition	Q35 : To take mind off other thing	3.76	.744
Family / friends expectation	Q21: Because people tell me I need to	3.70	.789



**Figure 2: The Highest Motivation Factors for The Female Respondents to Involve In Physical Activity**

Table 2 and figure 2 reveal the motivation factor for the female respondents to engage in physical activities. The highest factor is the competition / ego domain which is Q17 “to be the best in the group” (4.78±4.122). The female respondents reveal that, they need to be the best in the group so they can impress other their friends by showing their determination and maybe they will be given an award or appreciation. The second highest factor is the physical condition Q15 “to maintain physical health” (4.52±0.614). To be healthy they need to consume a healthy food. In addition, exercise is also important if they want to be a healthy person. Exercise can help prevent heart disease, stroke and diabetes. The third factor for the female respondents to participate in physical activity is an enjoyment domain which is Q13 “because it makes me happy” (4.48±0.609). Playing sports can reduce their stress and this contribute to a happier person. Friends are a mood-lifter to engage in activities and being on a team creates a close bond between them. Participation in sports can make them feel the enjoyment rather than being alone or anti-social. Next is the mastery domains which is Q16 “to improve existing skills” (4.48±0.646). When involves in sports, automatically they will learn new skills from the coaches, trainers and teammates. Those skills will help them be better during competitions. For the affiliation domains, it shows that the two items have the same mean which is Q20 “to do something in a common with friends” and Q38 “to be with friends” (4.36±0.631). Physical activity brings out variety of people, so in that case they will share a common point of interest. In addition, the physical activity act as medium to get along socially with others and meet new friends. Next motivation factor is the appearance domain which is Q36 “to lose weight, to look better” (4.28±0.701). Physical activity creates an opportunity to be in an ideal body weight since the females would love to get fit and keep up a with an ideal body weight thus to search for a good companion. To have an ideal body weight, it is important to engage in sporting activities so that it can help achieve a good appearance. When they have a good appearance, it builds confidence when they know that they can practice, improve and achieve their goals.

Last but not least, the next motivation factor is psychological condition which is Q35 “to take mind off other thing” (3.76±0.744). Exercise can help to relieve stress, reduce anxiety and ward off depression. The lowest mean is family and friends’ expectation domains, which is Q21 “because people tell me I need to” (3.70±0.789). Motivation and support from family member and friends are important because they can see what they can achieve. They care about their lifestyle and give advice to get involved in sports so the feel of loneliness no longer haunted their life.

**Table 3: Overall Internal Consistency of Palms Between the Male And The Female Respondents**

<b>Subscales</b>	<b>Internal consistency (α)</b>
<b>Mastery</b>	0.60
<b>Physical Condition</b>	0.72
<b>Affiliation</b>	0.79
<b>Psychological Condition</b>	0.53
<b>Appearance</b>	0.76
<b>Family and friends expectation</b>	0.72
<b>Enjoyment</b>	0.70
<b>Competition / Ego</b>	0.70
<b>Total</b>	0.89

A table 3 shows the subscales internal consistency between the male and the female respondents. In order to find the internal consistency, the Cronbach's alpha had been used to evaluate. The good internal consistency is above 0.70; however, values above 0.80 are preferable. The results show that the internal consistency for each subscale varied between 0.53 to 0.79 and the total of the subscales of PALMS scores was excellent ( $\alpha=0.89$ ). The highest of the consistency is affiliation factor  $\alpha=0.79$ , follow by appearance factor  $\alpha=0.76$ , physical condition, family / friends expectation factor  $\alpha=0.72$ , enjoyment and competition / ego  $\alpha=0.70$ , mastery factor  $\alpha=0.60$  and the lowest consistency is psychological condition  $\alpha=0.53$ .

**Table 4: T-Test Result Based On The 8 Motive Factors Among the Male and The Female Respondents**

Motives	t	P=value
Mastery	3.01	0.59
Physical condition	0.19	0.52
affiliation	0.29	0.6
Psychological condition	2.51	0.30
Appearance	3.00	0.14
Family / friend expectation	1.77	0.16
enjoyment	0.14	1.27
Competition / ego	1.00	0.18

\* $p < .05$

Table 4 shows the p value for the eight motivation factors among the male and the female respondents. There is no significant difference between factors among the male and the female with hearing impairment in mastery ( $t=3.01$ ,  $p>.05$ ), physical condition ( $t=0.19$ ,  $p>.05$ ), affiliation ( $t=0.29$ ,  $p>.05$ ), psychological condition ( $t=2.51$ ,  $p>.05$ ), appearance ( $t=3.00$ ,  $p>.05$ ), family / friends expectation ( $t=1.77$ ,  $p>.05$ ), enjoyment ( $t=0.14$ ,  $p>.05$ ) and competition / ego ( $t=1.00$ ,  $p>.05$ ).

**Table 5: Comparison of The T-Test Between the Male and The Female Respondents**

Genders	Mean	SD	Internal Consistency ( $\alpha$ )	t	df	p-value
Male	3.79	.735	.817			
PALMS Female	4.004	.949	.878	-1.14	98	0.15

\* $p < .05$

Table 5 shows the comparison between the male and the female respondents to participate in sport. It reveals that there is no significant difference between the male respondents' t (98) = -1.14,  $p >.05$  and also the female respondents' t (98) = -1.14,  $p >.05$ .

## Discussion

Female respondents wanted to be physically active in physical activity along with the male respondents but there is a lot of barriers that hinders them towards the matter (Allender, Cowburn, & Foster, 2006). The female respondents have a high motivation level than the male respondents when involving in physical activity. This is different with the previous study that indicated females have less motivation to involve in physical activity rather than male because

female are less active than male in physical activity (Wilson, 2016). Even if the male respondents do not have high motivation level than the female respondents, it does not mean that male are not physically active. It is just the level of motivation for both genders are different. There is no significant difference in the level of motivation among the male and the females when involve in physical activities and this is consistent with the past study (Van Heerden, 2014). Motivations are very important especially when involving in physical activity. Roychowdhury (2014) reported that motivation is a direction of attitude for people who want to be successful in life especially when involving in physical activity whether it is males or females. The purpose of participation in physical activities is to encourage them to gain experience with the different activities and different people.

Studies on the participation motivation suggested that there are systematic differences between participation motives among the male and female respondents (Roychowdhury, 2012). The males indicated that the primary motives they involve in physical activity because it is fun but it is otherwise in previous study stated that they involve in physical activity is because to take part in the competition / ego (Jamshidi, Hossien, Sajadi, Safari, & Zare, 2011). Findings stated that males are more competitive than the females, but past study mentioned that females are more competitive than males (Deaner, Balish, & Lombardo, 2016). The outcome of the study revealed that competition / ego is the primary motive among females to engage in physical activity where its explained that they need “to be the best in the group”. Females are more towards looking for intrinsic motivation and this is consistently with the past study that also reveal the females are persuaded by the intrinsic indicators, for example social competence in exercises (Shah, 2016).

The male respondents are more likely to enjoy the physical activity rather than the female respondents. When they feel the enjoyment in physical activity, they will continue to take part in sport without limitation. Males would like to be active and show their talents and this is also been mentioned by the past study that demonstrated if they have an alternate accomplishments objectives as to sports interest and it is sensible to recommend that their achievement is an essential of enjoyment (Kondric, Sindik, Furjan-Mandic, & Schiefler, 2013). Males also like to show their ability while acquire their skills and this is no different compare to previous study also revealed that the male students choose mastery or skill development for their motivation to involve in sport because they want to improve the skill and prove themselves in their school team (ERDOĞDU et al., 2014).

Able-bodied female is more active especially when involving in physical activity compare to female with disabilities. According to Martin and Whalen (2012) they stated that persons with disabilities are less likely to involve in physical activity because they are not confident with themselves and do not prefer to interact and socialize with others. When they are not actively involved in physical activity, they will have increased risk of obesity, stroke or heart attack (Richardson et al. 2017).

Both males and females think they may feel boredom, stress, depression and anxiety when at home or when they are not doing any exercise. Example, positive feelings, self-awareness and independence; can decrease the negative complications of limitations (Shah, 2016). The majority of the female respondents feel that by involving in physical activity, they found enjoyment and can have a positive thought towards the quality of life. Enjoyment in the context of physical activity has been defined as a positive affective response that reflects feelings of pleasure, liking and fun (Jin, Yun, & Agiovlasis, 2017). Enjoyment during school



based on physical activity program is the key components for promoting health for the persons with disabilities.

Sports provide a number of physical and psychological benefits to individual with disabilities which include them into family and community activities (Hua et al., 2013). Participations in leisure intentions helps persons with incapacities to redeem their character and to handle the dignity of a disabled body (Hua et al., 2013). This also provide the opportunity for the persons with disabilities to show their capabilities to other people that they can do better than the able bodied in sporting activities and proud of themselves for the achievement in sports. When the persons with disabilities understand that he or she is good in sports and physical activity, they can join their friends and peers who are with or without disabilities in sports and leisure, and that will inspire them to participate in sport and physical activities (Menear & Shapiro). To have a healthy mind and the body, they need to get involve with other people and share the skill to ensure the knowledge from physical activity that they acquired can be improved. The reason for the male respondents to get involved in physical activity is to maintain their shape of body and to look better with healthy body. Female rated the appearance motives higher than the male colleague (Molanorouzi et al., 2014). This is consistent with the current study. They consistently care more about their look, so they have the confidence to communicate with others when they involve in physical activity.

### **Conclusion**

Participation in physical activity will lead to maintaining a healthy body, meet new friends, share the same interest, have a good appearance and attraction, get new skills and knowledge related with the sports, can adapt easily with the environment and the most importantly are the persons with disabilities able to connect and have the social interaction. Furthermore, the persons with disabilities are very sensitive due to their impairments. By participating in physical activity, so that they will experience the real scenario and know better on how to cope with people who look down on them. Abled bodied and the persons with disabilities have the same role in this world, which is to encourage other people to involve in physical activity. When the person with disabilities are directly involved in physical activity, they will automatically be able to control their feelings or emotions when some people look down and ridicule their ability.

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