

行政院國家科學委員會專題研究計畫 期中進度報告

中風病人手功能量表之發展(1/3)

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「中風病人上肢功能量表」題庫之建立

主要架構：

一. 確定 ICF 之分類與定義

本研究以依據世界衛生組織所推行的 International Classification of Functioning, Disability and Health (ICF) 為建立「中風病人上肢之功能量表」題庫的主要架構。在 ICF 的分類中，以「活動」及「參與」(Activities and Participation) 項目內的 Lifting and carrying objects、Fine hand use 及 Hand and arm use 三大項分類與為上肢功能活動。較相關研究者同時蒐集常用於中風患者上肢功能評量的評估工具(含 Motor assessment scale(MAS)、Test d'Evaluation des Membres Superieurs de Personnes Agees (TEMPA)、Jebsen Hand Function test(JHFT)、Wolf Motor Function Test(WMFT)、Nine-whole peg test、Box & Block test、Purdue test、Minnesota Rate of Manipulation test(MRMT)、Peabody Developmental Motor Scale(PDMS)、Smith Hand Function Evaluation(SHFE)、O'Connor Finger Dexterity test、O'Connor Dexterity test、Upper Extremity Function Test(UEFT)、Functional test of the hemiparetic upper extremity(Hemi-UE test)、Sollerman hand function test(Sollerman test)等 15 項。)，並將這些工具之項目歸類於 ICF 上肢功能三大項目，若無法歸類則列為其它類別，故共為四大類。若 ICF 定義之上肢功能 ICF 定義 Activities 為個人執行動作或工作的能力 (*Activity is the execution of a task or action by an individual.*)，Participation 則為個人生命生存情境所包含的事物 (*Participation is involvement in a life situation.*)。當個人在執行 Activities 有困難時定義為 Activity limitations (*Activity limitations are difficulties an individual may have in executing activities.*)，個人在其生命情境所可能遇到的困難定義為 Participation restrictions (*Participation restrictions are problems and individual may experience in life situations.*)。無相關項目，則研究者自行設計項目以符合 ICF 之架構。另外，為使項目容易施測，研究者盡可能將項目簡化。

Note: 接下來簡述 ICF 三大項及其他之題目。

以下簡述本研究四大分類之定義及項目。

- 一、Lifting and carrying objects：定義為舉起一物品或將物品由一處移至另一處，共包含 lifting、carrying in the hands、carrying in the arms、carrying on shoulders, hip, back、carrying on the head、putting down objects 等六項。
- 二、Fine hand use：定義為可以協調地使用個人的手部、手指與拇指，處理、撿起、操弄與釋放物體。包含 picking up、grasping、manipulating、releasing 等四項。
- 三、Hand and arm use：定義為可以協調地使用個人的手部與手臂來移動或操弄

物品。包含 pulling、pushing、reaching、turning or twisting the hands or arms、throwing、catching 等六項。

四、Others：凡無法歸類於上述三大項之項目，均屬此項。其他項再依活動特性加以歸類，如是否使用工具等。包含 writing、tool using(使用工具操作一般日常活動)、coordination hand activities(需單手或雙手協調能力的活動)、gross motor 等四項。

評分標準：採三點量尺的方式，0~2 分。

0 分：受測者完全無法執行活動

1 分：受測者可完成部分活動，或完成活動時間超出合理範圍

2 分：受測者可在合理時間內完成活動

~~Lifting and carrying objects 定義為舉起一物品或將物品由一處移至另一處，共包含 lifting、carrying in the hands、carrying in the arms、carrying on shoulders, hip, back、carrying on the head、putting down objects 等六項。~~

~~Fine hand use 定義為可以協調地使用個人的手部、手指與拇指，處理、撿起、操弄與釋放物體。包含 picking up、grasping、manipulating、releasing 等四項。~~

~~Hand and arm use 定義為可以協調地使用個人的手部與手臂來移動或操弄物品。包含 pulling、pushing、reaching、turning or twisting the hands or arms、throwing、catching 等六項。~~

~~蒐集常用於中風患者上肢功能評量的評估工具~~

~~目前所蒐集的評估工具有：MAS、TEMPA、Jebsen test、the Wolf Motor Function Test(WMFT)、nine whole peg test、Box & Block test、Purdue test、Minnesota Rate of Manipulation test(MRMT)、Peabody Developmental Motor Scale(PDMS)、Smith Hand Function Evaluation、O'Connor Finger Dexterity test、O'Connor Dexterity test、UEFT、the Functional test of the hemiparetic upper extremity、Sollerman hand function test 共 15 項。(按：老師，我這邊沒有加入 ARAT 的 items，是否須再予以對照及補充？當然要加上去囉！)~~

~~以 ICF 之分類為依據，運用「活動分析」加以歸類評估工具的個別評量項目~~

~~較複雜的評估項目以合併 ICF 分類之方式為主~~

~~不能歸類者列為「其他」~~

~~在各個歸類中刪除重複者，並選出具代表性的評估項目~~

Categories of ICF	Definitions of ICF	Relative items	
		單手	雙手
Lifting and carrying objects -- Raising up an object or taking something from one place to another, such as when lifting a cup or carrying a child from one room to another.			
Lifting	Raising up an object in order to move it from a lower to a higher level, <u>such as when lifting a glass from the table.</u>	JHFT: 拿起大但重量輕的物品 (需離開桌面) JHFT: 拿起大但重量重的物品 (需離開桌面)	缺→將椅子由一處移至另一處(包含 Lifting 及 Carrying in the hands 一以施測)缺
Carrying in the hands	Taking or transporting and object from one place to another using the hands, <u>such as when carrying a drinking glass or a suitcase.</u>	MAS: 拿起桌上的塑膠杯, 跨越身體中線移到另一邊。	缺
Carrying in the arms	Taking or transporting and object from one place to another using the arms and hands, <u>such as carrying a child.</u>	缺: 當所拿的東西較大且有些重量時會採此法, 尤以東西較重時會以雙手支撐	
Carrying on shoulders, hip and back	Taking or transporting an object from one place to another using the shoulders, hip or back, or some combination of these, <u>such as when carrying a large parcel.</u>	缺: 屬勞力活動, 此法尤以東西很大、很重時會使用, 一般情形少用(女性更少使用), 以雙手同時使用的情形較多。 是否需要納入? (器材需另行準備) 缺	
Carrying on the head	不考慮此方式		
Putting down objects	Using hands arms or other parts of the body to place an object down on a surface or place, <u>such as when lowering a container of water to the ground.</u>	缺→將桌上的杯子置於地上	缺→將桌上的椅子拿下(桌子的高度及椅子的重量會影響難易度)(有安全上的顧慮)
Fine hand use -- Performing the coordinated actions of handling objects, picking up, manipulating and releasing them using one's hand, fingers and thumb, such as required to lift coins off a table or turn a dial or knob.			

Picking up	Lifting or taking up a small object with hands and fingers, <u>such as when picking up a pencil.-</u>	<u>WMFT、TEMPA、Hemi-UE test</u> ：拿起迴紋針、原子筆蓋或錢幣	<u>向前伸展，用雙手拿起直徑 5 ins 的球，再放下</u> <u>缺→將原子筆蓋套回原子筆上(一手拿原子筆，另一手拿筆蓋)</u>
Grasping	Using one or both hands to seize and hold something, <u>such as when grasping a tool or a door knob.-</u>	<u>ARAT、PDMS、SHFE、UEFT、Hemi-UE test、Sollerman test</u> ：拿起一個正方形積木、玩具 (在測 <i>lifting</i> 時，可一起看是否具 <i>grasp</i> 杯子等之能力?)	<u>缺-MAS：向前伸展，用雙手拿起直徑 5 ins 的球，再放下</u>
Manipulating	Using fingers and hands to exert control over, direct or guide something, <u>such as when handling coins or other small objects.-</u>	<u>Sollerman test</u> ：由錢包中拿出錢幣、將錢幣由平坦的桌面拿起，放到固定在牆上的錢包中→將桌面上的數個錢幣拿起在手中	<u>PDMS、SHFE、Sollerman test</u> ：解開/扣上鈕扣
		<u>MRMT</u> ：翻轉 MRMT 棋 →將桌面上的錢幣翻面 (以錢幣代替 MRMT 棋)	<u>SHFE、Sollerman test</u> ：打開/拉上拉鍊
Releasing	Using fingers and hands to let go or set free something so that it falls or changes position, <u>such as when dropping an item of clothing.-</u>	<u>PDMS</u> ：放掉正方形積木	<u>缺→放掉 Grasping 項的球</u>
Hand and arm use-- Performing the coordinated actions required to move objects or to manipulate them by using hands and arms such as when turning door handles or throwing or catching an object.			
Pulling	Using fingers, hands and arms to bring an object towards oneself, or to move it from place to place, <u>such as when pulling a door closed.-</u>	<u>PDMS</u> ：拉細繩以拿到小玩具→將桌面上的報紙或雜誌拉近自己(報紙或雜誌不離開桌面，非用拿的) <u>拉動細繩以拿到小玩具(太複雜了)</u>	<u>缺→將桌子拉近自己</u>
Pushing	Using fingers, hands and arms to move something from oneself, or to move it from place to place, <u>such as when pushing an animal away.-</u>	<u>缺→將桌面上的報紙或雜誌推離自己(報紙或雜誌不離開桌面，非用拿的)</u>	<u>缺→將桌子推離自己</u>

Reaching	Using the hands and arms to extend outwards and touch and grasp something, <u>such as when reaching across a table or desk for a book.-</u>	缺→ <u>跨越桌子拿另一邊的原子筆</u>	<u>ICF: 跨越桌子拿另一邊的書</u>
Turning or twisting the hands or arms	Using fingers, hands and arms to rotate, turn or bend an object, <u>such as is required to use tools or utensils.-</u>	<u>PDMS: 翻書頁(報紙或雜誌)</u>	<u>Hemi-UE test: 擰抹布</u> <u>Sollerman test: 轉開寬口瓶的蓋子</u>
Throwing	Using fingers, hands and arms to lift something and propel it with some force through the air, <u>such as when tossing a ball.-</u>	缺→ <u>將紙團丟進垃圾桶 or 將紙團丟給治療師</u>	缺： <u>一般丟東西時，單手較易使力</u>
Catching	Using fingers, hands and arms to grasp a moving object in order to bring it to a stop and hold it, <u>such as when catching a ball.-</u>	缺： <u>單手接治療師所丟的紙團</u>	缺： <u>雙手接治療師所丟的紙團</u>
Others			
Writing		<u>WMFT、SHFE、UEFT、Sollerman test: 寫名字</u>	
<u>Tool using</u> *hand-manipulation— forearm-slightly-pronation & supination wrist, elbow, shoulder-support *hand-lateral prehension— wrist flexion/ extension— elbow &— shoulder support		<u>PDMS: 用刀子及叉子切開樂高黏土</u>	<u>PDMS: 使用剪刀剪下直線、正方形、圓形</u>
	<u>Grasping + Turning or twisting the hands or arms</u>	<u>ARAT: 將水壺的水倒入杯中 (以固體物如錢幣等代替水? →將杯中的錢幣倒在桌上)</u>	
	<u>*hand-manipulation forearm-slightly pronation & supination</u> <u>wrist, elbow, shoulder- support</u>	<u>PDMS: 用湯匙在杯中攪拌</u>	
	<u>*hand-lateral prehension wrist-flexion/ extension— elbow &— shoulder support</u>	<u>PDMS: 用湯匙輕敲杯子側緣</u>	
<u>Coordination hand activities</u> *finger-slightly-extension—	<u>Picking up + Carrying in the hands + Release</u>	<u>PDMS: 將正方形積木放入杯中</u> <u>PDMS: 將正方形積木疊起來</u>	

thumb-opposition	*finger-slightly extension		PDMS、Hemi-UE test、
hand-manipulation	thumb-opposition		Sollerman test：將紙對摺→
wrist, elbow-support	hand-manipulation wrist, elbow-support		放到信封中
shoulder-abd-support	support		
thumb-			
hand-manipulation	thumb- hand-manipulation		TEMPA：洗紙牌及發紙牌
wrist, elbow,	wrist, elbow, shoulder-support		
shoulder-support	*hand-lateralprehension, manipulation	PDMS：脫襪子	PDMS：脫襪子
*hand-lateralprehension, manipulation	wrist & arm-support		
wrist & arm-support			SHFE：綁蝴蝶結→以緞帶(長 50~60cm)在書本上打蝴蝶結
			SHFE：綁鞋帶
			SHFE：繫皮帶
<u>Gross Motor</u>		<u>ARAT：將手拿到頭的後面</u>	
		<u>ARAT：將手拿到頭的上</u>	
		<u>ARAT：以手去碰嘴巴</u>	